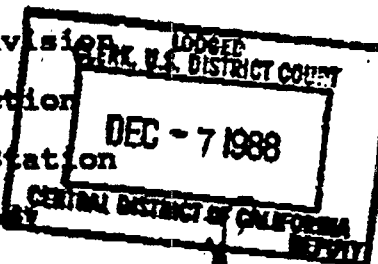
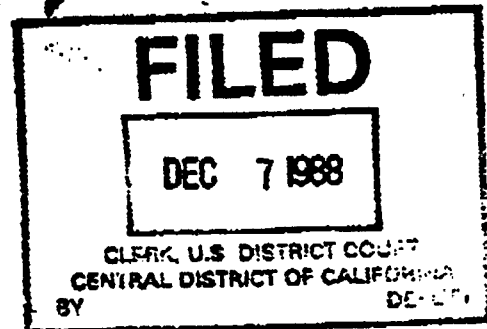


SDMS 128788
Item NO. 178

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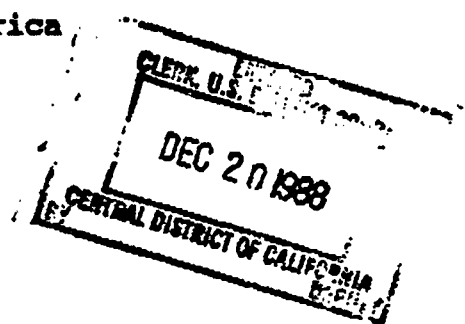
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24 UNITED STATES DISTRICT COURT
25 FOR THE CENTRAL DISTRICT OF CALIFORNIA

26 UNITED STATES OF AMERICA, THE STATE
27 OF CALIFORNIA, and THE CALIFORNIA
28 HAZARDOUS SUBSTANCE ACCOUNT

Plaintiffs,

v.

88 7196 WRP (Kx)
CIVIL ACTION NO.

PARTIAL CONSENT DECREE

1 CHEVRON CHEMICAL COMPANY,)
CHEVRON PIPE LINE CO.,)
2 CHEVRON USA, INC.,)
ATLANTIC RICHFIELD COMPANY,)
3 including ANACONDA AMERICAN)
BRASS DIVISION,)
4 AMERICAN NATIONAL CAN,)
TEXACO INC., including RICHFIELD)
5 EAST DOME UNIT and SIGNAL HILL)
WEST UNIT and Subsidiaries,)
6 EXXON CORPORATION,)
MCDONNELL DOUGLAS CORPORATION,)
7 UNOCAL CORPORATION,)
NI INDUSTRIES, INC. for NORRIS, INC.,)
8 SUN EXPLORATION & PRODUCTION COMPANY,)
OCCIDENTAL PETROLEUM CORPORATION,)
9 MOBIL OIL CORPORATION including)
SUPERIOR OIL COMPANY,)
10 SOUTHERN CALIFORNIA GAS COMPANY,)
KIEWIT CONTINENTAL, INC. for)
11 CONTINENTAL CAN,)
SHELL OIL COMPANY,)
12 SANTA FE ENERGY COMPANY/CHANSIOR)
WESTERN OIL DEVELOPMENT,)
13 MARTIN MARIETTA CORPORATION for)
MARTIN MARIETTA CARBON INC., and)
14 COMMONWEALTH ALUMINUM CORPORATION)
(formerly known as MARTIN)
15 MARIETTA ALUMINUM, INC.),)
UNION PACIFIC RESOURCES COMPANY)
16 for CHAMPLIN PETROLEUM CO.,)
SOULE'-ARNON LIQUIDATING AGENCY,)
17 CONOCO, INC.,)
DOUGLAS OIL COMPANY OF CALIFORNIA,)
18 GENERAL MOTORS CORPORATION,)
LONG BEACH OIL DEVELOPMENT COMPANY,)
19 LOCKHEED AERONAUTICAL SYSTEMS)
COMPANY a division of LOCKHEED)
20 CORPORATION,)
INTERPACE CORPORATION,)
21 ALUMINUM COMPANY OF AMERICA,)
SOUTHERN CALIFORNIA RAPID TRANSIT)
22 DISTRICT,)
STROH CONTAINER COMPANY for JOSEPH)
23 SCHLITZ BREWING COMPANY)
ALLIED-SIGNAL, INC. for GARRETT)
24 AIRESEARCH,)
AMERICAN AIRLINES, INC.,)
25 BETZ LABORATORIES, INC.,)
BETHLEHEM STEEL CORPORATION,)
26 INSILCO CORPORATION for SINCLAIR)
PAINT COMPANY,)
27 DEPARTMENT OF WATER AND POWER of)
the CITY of LOS ANGELES,)
28 ///)

1	QUANTUM CHEMICAL CORPORATION,)
	EMERY DIVISION,)
2	SOUTHERN CALIFORNIA EDISON COMPANY,)
	REYNOLDS METALS COMPANY,)
3	CALGON CORPORATION/CALGON VESTAL)
	LABORATORIES,)
4	UNITED STATES BRASS CORPORATION)
	for EASTMAN CENTRAL,)
5	LONG BEACH UNIT, WILMINGTON OIL)
	FIELD, CALIFORNIA (CITY OF LONG)
6	BEACH, UNIT OPERATOR: THUMS LONG)
	BEACH COMPANY, AGENT FOR FIELD)
7	CONTRACTOR),)
	MITCHELL ENERGY CORPORATION,)
8	BORG-WARNER CORPORATION for BYRON)
	JACKSON PUMP DIVISION,)
9	INGERSOLL-RAND COMPANY for PROTO)
	TOOL,)
10	LIBERTY VEGETABLE OIL COMPANY,)
	EDGINGTON OIL COMPANY,)
11	REICHOLD CHEMICALS, INC.,)
	CROWLEY MARITIME CORPORATION for)
12	CROWLEY TOWING & TRANSPORTATION)
	CO. and CROWLEY ENVIRONMENTAL)
13	SERVICES CORPORATION,)
	MENASCO, INC.,)
14	USG CORPORATION for HOLLYTEX CARPET)
	MILLS,)
15	XEROX CORPORATION,)
	MAJOR PAINT COMPANY,)
16	SOUTHERN PACIFIC TRANSPORTATION)
	COMPANY,)
17	TRW INC.,)
	COOPER DRUM COMPANY for SUPERIOR)
18	DRUM,)
	ANCHORLOK CORP. for ANCHORLOK LEAR)
19	SIEGLER CORP. and ROYAL)
	INDUSTRIES, INC.,)
20	SUPERIOR INDUSTRIES)
	INTERNATIONAL, INC.,)
21	FLINT INK CORPORATION,)
	BEATRICE/HUNT WESSON,)
22	FRANCISCAN CERAMICS, INC.,)
	EMERSON & CUMING INC.,)
23	THE TIMES MIRROR COMPANY for)
	LOS ANGELES TIMES and TIMES)
24	MIRROR PRESS,)
	PPG INDUSTRIES, INC.,)
25	PARKER-HANNIFIN CORPORATION for)
	BERTEA CORPORATION,)
26	DELTA AIR LINES, INC. for WESTERN)
	AIRLINES,)
27	SOUTHWESTERN ENGINEERING CO.,)
	THE UNIROYAL GOODRICH TIRE)
28	COMPANY,)

1	INTERNATIONAL PAPER COMPANY,)
	ARATEX SERVICES, INC. for RED STAR)
2	INDUSTRIAL SERVICE,)
	MAYTAG CORPORATION for GAFFERS &)
3	SATTLER,)
	CARNATION COMPANY,)
4	WELCH'S OVERALL CLEANING)
	COMPANY, INC. for WELCH'S)
5	INDUSTRIAL UNIFORM,)
	GENERAL FELT INDUSTRIES, INC., a)
6	division of KNOLL INTERNATIONAL)
	HOLDINGS, INC.,)
7	WILLAMETTE INDUSTRIES INC. for)
	WESTERN KRAFT,)
8	TRANSPORTATION LEASING CO. for THE)
	GREYHOUND CORP.,)
9	NL INDUSTRIES, INC. for NL METALS,)
	McAULEY LCX CORPORATION,)
10	UNITED AIR LINES, INC.,)
	THE PROCTOR & GAMBLE MANUFACTURING)
11	COMPANY,)
	JAYBEE MANUFACTURING CORPORATION,)
12	SAFeway STORES, INC.,)
	THE FLYING TIGER LINE INC.,)
13	LUXFER USA LIMITED,)
	TREE ISLAND INDUSTRIES LTD.,)
14	GENERAL LATEX AND CHEMICAL CORP.,)
	ARMCO INC.,)
15	REISNER METALS, INC.,)
	GATX TERMINALS CORPORATION,)
16	DUNN-EDWARDS CORPORATION,)
	HUGHES AIRCRAFT COMPANY,)
17	THE FIRESTONE TIRE & RUBBER COMPANY,)
	MAX FACTOR & COMPANY,)
18	UNITED PARCEL SERVICE OF AMERICA,)
	INCORPORATED,)
19	CALMAT CO. for CONROCK CO.,)
	SUPRACOTE, INC.,)
20	FPCO OIL & GAS CO. for PETRO-LEWIS)
	CORPORATION,)
21	VAN WATERS & ROGERS,)
	DAVIDSON P.W.P,)
22	KENOSHA AUTO TRANSPORT CORPORATION,)
	AMERICAN CAN COMPANY/PRIMERICA)
23	CORPORATION,)
	BORDEN, INC.,)
24	DEFT, INC.,)
	COCA-COLA BOTTLING COMPANY OF LOS)
25	ANGELES,)
	OWENS-ILLINOIS, INC.,)
26	CHAMPION INTERNATIONAL CORPORATION)
	for ST. REGIS,)
27	HYDRIL COMPANY,)
	GEORGIA-PACIFIC CORPORATION,)
28	LEVER BROTHERS COMPANY, INC.,)

1 7UP/RC BOTTLING COMPANIES OF)
SOUTHERN CALIFORNIA,)
2 INTERNATIONAL EXTRUSION CORP.,)
SPARKLETTS DRINKING WATER)
3 CORPORATION,)
BJ-TITAN SERVICES COMPANY, for)
4 B.J. SERVICES EQUIPMENT COMPANY,)
LONGVIEW FIBRE COMPANY,)
5 UNION CARBIDE CORPORATION,)
THE COCA-COLA COMPANY,)
6)
7 Defendants.)

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TABLE OF CONTENTS

	Page
I. Jurisdiction	3
II. Parties.	4
III. Denial of Liability	4
IV. Binding Effect	5
V. Site Background	6
VI. Purpose	8
VII. Definitions	10
VIII. Payments by Cash Defendants	15
IX. Work to be Performed	16
X. Escrow Account	24
XI. Worker Health and Safety Plan	29
XII. Quality Assurance/Quality Control	30
XIII. Project Coordinators	32
XIV. Site Access	34
XV. Compliance with Applicable Laws and Regulations .	36
XVI. Data Exchange	37
XVII. Retention of Records	42
XVIII. Reservation of Rights	44
XIX. Reimbursement of Future Response and Oversight Costs	50
XX. Reimbursement of Past Costs	52
XXI. Priority of Claims	53
XXII. Stipulated Penalties	54
XXIII. Force Majeure	63
XXIV. Dispute Resolution	65

1	XXV.	Form of Notice	70
2	XXVI.	Modification	73
3	XXVII.	Admissibility of Data	73
4	XXVIII.	Defendants' Right of Contribution and Indemnity	
5		and Covenant Not to Sue Each Other.	74
6	XXIX.	Contribution Protection	75
7	XXX.	Covenant Not to Sue	76
8	XXXI.	Waiver of Claim-Splitting Defense.	80
9	XXXII.	Community Relations	81
10	XXXIII.	Lodging and Public Participation	81
11	XXXIV.	State and Local Agency Participation	82
12	XXXV.	Consistency with the NCP	83
13	XXXVI.	Indemnification	84
14	XXXVII.	Claims Against the Fund.	86
15	XXXVIII.	Continuing Jurisdiction	86
16	XXXIX.	Representative Authority	87
17	XL.	Effective Date	87
18	XLI.	Termination and Satisfaction	87
19	XLII.	Section Headings	89
20	XLIII.	Counterparts	89

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PARTIAL CONSENT DECREE

WHEREAS, the United States of America (hereinafter "United States"), on behalf of the Administrator of the United States Environmental Protection Agency (hereinafter "EPA"), has filed concurrently with this Partial Consent Decree a complaint in this matter pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986) (hereinafter "CERCLA"), seeking to compel the Defendants (those parties identified in Section II (Parties) of this Partial Consent Decree, and hereinafter referred to as "Defendants") to perform certain remedial actions and to recover certain response costs that have been and will be incurred by the United States in response to alleged releases and threatened releases of hazardous substances from the landfill known as the Operating Industries, Inc. site (hereinafter "OII" or the "Site") located at 900 Potrero Grande Drive, Monterey Park, California.

WHEREAS, the State of California, on behalf of the Department of Health Services (hereinafter "the State") has filed concurrently with this Partial Consent Decree a complaint in this matter pursuant to CERCLA, the Hazardous Substance Account, California Health and Safety Code §§ 25300, et seq., California Civil Code § 3494, and California Health and Safety Code §§ 205 and 206 seeking to compel the Defendants to perform certain remedial actions and to recover certain response costs that have

1 been incurred by the State in response to alleged releases and
2 threatened releases of hazardous substances from the Site.

3
4 WHEREAS, the United States and the State allege that the
5 Operating Industries, Inc. landfill is a facility as defined in
6 Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

7
8 WHEREAS, the United States and the State allege that the
9 Defendants are persons, as defined in Section 101(21) of CERCLA,
10 42 U.S.C. § 9601(21), and California Health and Safety Code
11 § 25319 and that wastes and constituents thereof generated by the
12 Defendants sent to and disposed of at the Site, are "hazardous
13 substances," as defined in Section 101(14) of CERCLA, 42 U.S.C.
14 § 9601(14), and California Health and Safety Code §§ 25316 and
15 25317.

16
17 WHEREAS, the United States and the State allege that the
18 past, present, and potential migrations of hazardous substances
19 from the Site constitute actual and threatened "releases," as
20 defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22), and
21 California Health and Safety Code §§ 25320 and 25321, and further
22 allege that the Defendants are persons subject to liability under
23 Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and California
24 Health and Safety Code § 25360.

25
26 WHEREAS, pursuant to Sections 121 and 122 of CERCLA, the
27 United States, the State and the Defendants have each stipulated
28 and agreed to the making and entry of this Partial Consent Decree

1 (hereinafter "Decree" or "Consent Decree") prior to the taking of
2 any testimony, and in full settlement of the claims raised in the
3 complaints.

4
5 WHEREAS, the United States, the State and the Defendants
6 have agreed upon a settlement pursuant to which certain
7 Defendants are obligated to conduct certain remedial work and to
8 make payments to the EPA and the State, and other Defendants are
9 obligated to make payments to the EPA and the State.

10
11 WHEREAS, the United States, the State and the Defendants
12 agree that the settlement of the claims raised in the complaints
13 and entry of this Consent Decree is in good faith, in an effort
14 to avoid expensive and protracted litigation, without any
15 admission or finding of liability or fault as to any allegation
16 or matter.

17
18 NOW THEREFORE, it is ORDERED, ADJUDGED, AND DECREED as
19 follows:

20
21 I. JURISDICTION
22

23 The Court has jurisdiction over the subject matter of this
24 action and the signatories to this Decree pursuant to CERCLA, 42
25 U.S.C. §§ 9601, et seq. and 28 U.S.C. §§ 1331, 1345, and pendent
26 jurisdiction over the claims arising under the laws of
27 California. The Defendants shall not challenge the Court's
28 jurisdiction to enter and enforce this Decree. Defendants listed

1 in Section II (Parties) waive service of summons and, for the
2 purpose of this Decree, agree to submit themselves to the
3 jurisdiction of this Court.

4
5 II. PARTIES
6

7 A. The Parties to this Decree are the United States of
8 America, the State, the California Hazardous Substance Account
9 and the Defendants. All actions taken by the State pursuant to
10 this Decree, including all approvals, reservations of rights, and
11 covenants not to sue are solely those of the California
12 Department of Health Services (DHS) and of no other agency except
13 that the California Attorney General also covenants not to sue
14 the Defendants, as provided in Section XXX (Covenant Not to Sue).
15 Defendants are those entities listed herein.
16

17 B. Settling defendants are either defendants that have
18 agreed to pay the specified amounts under the Schedules set forth
19 in Attachment A and are identified in Attachment A ("Cash
20 Defendants"), or other settling defendants that have agreed to
21 undertake the Work and certain other obligations set forth in
22 this Decree and are identified in Attachment B ("Work
23 Defendants").
24

25 III. DENIAL OF LIABILITY
26

27 The Defendants deny any and all legal or equitable liability
28 under any federal, state, or local statute, regulation,

1 ordinance, or common law for any response costs, damages or
2 claims caused by or arising out of conditions at or arising from
3 the OII Site. By entering into this Decree, or by taking any
4 action in accordance with it, Defendants do not admit any
5 allegations contained herein or in the complaints, nor do
6 Defendants admit liability for any purpose or admit any issues of
7 law or fact or any responsibility for the alleged release or
8 threat of release of any hazardous substance into the
9 environment. Nothing in this Section shall alter Defendants'
10 agreement not to challenge the Court's jurisdiction as set forth
11 in Section I (Jurisdiction).

12
13 IV. BINDING EFFECT
14

15 This Decree shall apply to and be binding upon the
16 signatories, their successors, and assigns. No change in
17 ownership or corporate or partnership status shall in any way
18 alter the Defendants' responsibilities under this Decree. Each
19 Defendant shall be responsible and shall remain responsible for
20 carrying out all activities required of that particular Defendant
21 under this Decree. The Work Defendants shall provide a copy of
22 this Decree, as entered, and shall provide all relevant additions
23 to the Decree, as appropriate, to each person, including all
24 contractors and subcontractors, retained to perform the Work
25 contemplated by this Decree, and shall condition any contract for
26 the Work upon compliance with this Decree.

27 ///

28 ///

1 Work Defendants shall be jointly and severally responsible
2 for the performance of the Work Defendants' obligations outlined
3 in this Decree. In the event of the inability to pay or
4 insolvency of any one or more of the Work Defendants, regardless
5 of whether or not that Work Defendant or Work Defendants enter
6 into formal bankruptcy proceedings, or in the event that for any
7 other reason one or more of the Work Defendants do not
8 participate in the implementation of the Work, the remaining Work
9 Defendants agree and commit to complete the Work and activities
10 provided for in this Decree.

11

12 V. SITE BACKGROUND

13

14 The following is a summary of the Site background as alleged
15 by the United States and the State which, for the purposes of
16 this Decree, Defendants neither admit nor deny:

17

18 A. The Operating Industries, Inc. landfill is a 190-acre
19 facility, as that term is defined in Section 101(9) of CERCLA, 42
20 U.S.C. § 9601(9), located at 900 Potrero Grande Drive, Monterey
21 Park, California. The Site operated from 1948 through 1984, and,
22 over the course of its operation, accepted industrial solid,
23 liquid and hazardous wastes and municipal trash. Wastes accepted
24 at the OII Site include hazardous substances as defined in
25 Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and California
26 Health and Safety Code §§ 25316 and 25317.

27 ///

28 ///

1 B. The Site is located on the southwestern flank of the La
2 Merced hills (also called the Montebello hills), and is divided
3 by the California Highway 60 (Pomona Freeway), which runs roughly
4 east-west through the Site, dividing it into a 45-acre North
5 Parcel and 145-acre South Parcel. The Site is located at the
6 boundary between the San Gabriel groundwater basin to the north
7 and the Los Angeles Coastal groundwater basin to the south. The
8 important water-bearing units underlying the Los Angeles and San
9 Gabriel Basins, as well as the Site, are from oldest to youngest,
10 upper Pliocene Pico Formation, lower Pleistocene San Pedro
11 Formation, upper Pleistocene older alluvium (including "terrace
12 gravels"), and the Recent Alluvium (California Department of
13 Water Resources, 1961, 1966). The San Pedro Formation contains
14 the five major aquifers of the Los Angeles Coastal Plain and the
15 San Gabriel Basin, the Jackson, Hollydale, Lynwood, Silverado and
16 Sunnyside aquifers. The lower Pliocene Repetto formation and
17 older formations are found at depths greater than 1500 feet. The
18 Site is approximately one mile east of the Whittier Narrows
19 groundwater recharge area and the Rio Hondo River.

20
21 C. The Site was proposed for inclusion on the National
22 Priorities List (NPL) in October, 1984, and was subsequently
23 placed on the NPL in May, 1986, in accordance with
24 Section 105(a)(8) of CERCLA, 42 U.S.C. § 9605(a)(8).

25
26 D. The contaminants found at the Site include hazardous
27 substances as defined by CERCLA § 101(14) or as defined by
28 California Health and Safety Code §§ 25316 and 25317.

1 E. There have been releases of hazardous substances from
2 the Site and the Site poses numerous threats to human health and
3 the environment. The population in proximity to the Site include
4 the nearby residents of the City of Montebello and the City of
5 Monterey Park, those who travel on the section of the Pomona
6 Freeway which transects the Site, and workers in the several
7 businesses located on or near the Site.

8
9 F. EPA is currently performing the Remedial Investigation/
10 Feasibility Study ("RI/FS") at the Site. The RI/FS was begun in
11 1984. Phases I and II of this study have been largely completed,
12 and EPA is currently finishing Phase II and initiating Phase III
13 of the RI. When the RI/FS is completed, it will result in the
14 selection, design and implementation of a final overall remedy
15 for the Site.

16
17 VI. PURPOSE
18

19 The purpose of this Decree is to resolve the dispute among
20 the Parties as to whether remedial action may be necessary for
21 the Leachate Management and Site Control and Monitoring Operable
22 Units, (as described in Appendices A and B) to protect the public
23 health, welfare, and the environment from conditions which may be
24 present at the OII Site; obtain reimbursement from the Defendants
25 for certain of Plaintiffs' response costs; and settle any and all
26 claims against Defendants asserted by Plaintiffs in the
27 complaints filed in this matter.

28 ///

1 This Decree is also intended to serve the public interest by
2 protecting the public health, welfare, and the environment from
3 alleged releases and threatened releases of hazardous substances
4 at or from the OII Site by the implementation by the Work
5 Defendants of remedial actions and operations, monitoring, and
6 maintenance outlined in Section IX (Work to be Performed) of this
7 Decree.

8
9 The Parties recognize that the final remedy will be
10 determined after completion of the RI/FS and execution by the EPA
11 of a Record of Decision which determines the final remedy. All
12 Parties agree and the Court hereby determines that the remedies
13 selected by the Records of Decision which are the subject of this
14 Decree are consistent with the final remedy and are consistent
15 with the National Oil and Hazardous Substances Pollution
16 Contingency Plan, 40 C.F.R. Part 300 (hereinafter "National
17 Contingency Plan" or "NCP"). The Work performed in the
18 implementation of these Operable Units shall meet the substantive
19 standards of all "applicable requirements" and "relevant and
20 appropriate requirements" as those terms are defined in 40 C.F.R.
21 § 300.6, as generally described in CERCLA Compliance with Other
22 Environmental Statutes, October 2, 1985 (50 Fed. Reg. 47946,
23 November 20, 1985), as required by Section 121 of CERCLA, 42
24 U.S.C. § 9621, and as provided in Appendices A and B to this
25 Decree.

26 ///

27 ///

28 ///

VII. DEFINITIONS

A. "Appendix A" shall mean the Record of Decision for the Leachate Management Operable Unit.

B. "Appendix B" shall mean the Record of Decision for the Site Control and Monitoring Operable Unit.

C. "Appendix C" shall mean the OII Landfill SCM and LMS Scope of Work.

D. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9601, et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986).

E. "Contractor" shall mean the individual, company or companies retained by or on behalf of the Work Defendants to undertake and complete the Work. Each contractor and subcontractor shall be qualified to do those portions of the Work for which it is retained.

F. "Costs" or "Response Costs" shall mean oversight, administrative, enforcement, removal, investigative and remedial or other expenses incurred or to be incurred by EPA or the State relative to the OII Site.

///

1 G. "Construction" shall mean the phases of the Work
2 involving the construction of the remedy, in accordance with the
3 Design documents, the RODs and this Decree.

4
5 H. "Covered Matters" shall mean those conditions which the
6 alternatives selected in the RODs (attached as Appendices A
7 and B) are designed to remedy, the Work implemented under
8 Section IX (Work to be Performed), oversight costs associated
9 with the performance of that Work and for all past response
10 costs, including interest accrued thereon, incurred by the United
11 States, the State and the California Hazardous Substance Account
12 up to June 1, 1988. Covered Matters specifically do not include
13 removals, remedial actions which will be implemented pursuant to
14 the final remedy, the gas control and any future operable
15 unit(s), or any environmental condition which is identified in
16 the RI/FS (except to the extent those removals, remedial actions,
17 or those environmental conditions are already covered by
18 Appendices A or B or the Work). The Parties also agree that
19 remedial actions for groundwater contamination, if any, are not
20 Covered Matters under this Decree.

21
22 I. "DHS" shall mean the California Department of Health
23 Services.

24
25 J. "Defendants" shall include both the Cash Defendants and
26 the Work Defendants. "Cash Defendants" shall mean those parties
27 identified as Defendants and listed as such in Attachment A to
28 this Decree. "Work Defendants" shall mean those parties

1 identified as Defendants and listed as such in Attachment B to
2 this Decree.

3
4 K. "Design(s)" shall mean the phases of the Work wherein
5 engineering plans and technical specifications are developed for
6 implementation of the remedial actions, in accordance with the
7 RODs and this Decree and the EPA Superfund Remedial Design and
8 Remedial Action Guidance, (EPA OSWER Directive No. 9355.0-4A,
9 June 1986) ("RD/RA guidance").

10
11 L. "EPA" shall mean the United States Environmental
12 Protection Agency.

13
14 M. "Environment" shall mean (1) the navigable waters, the
15 waters of the contiguous zone, and the ocean waters of which the
16 natural resources are under the exclusive management of the
17 United States under the Fishery Conservation and Management Act,
18 and (2) any other surface water, groundwater, drinking water
19 supply, land surface or subsurface strata, or ambient air within
20 the United States or under the jurisdiction of the United States,
21 as defined in Section 101(8) of CERCLA, 42 U.S.C. § 9601(8).

22
23 N. "Hazardous substances" shall mean any substance included
24 in the definition of Section 101(14) of CERCLA, 42 U.S.C.
25 § 9601(14), or as defined by California Health and Safety Code
26 §§ 25316 and 25317.

27 ///

28 ///

1 O. "National Contingency Plan" or "NCP" shall refer to the
2 National Oil and Hazardous Substances Pollution Contingency Plan,
3 40 C.F.R. Part 300, and shall be used as that term is referred to
4 in Section 105 of CERCLA, 42 U.S.C. § 9605.

5
6 P. "OII Site" or the "Site" shall mean the landfill located
7 at 900 Potrero Grande Drive, in Monterey Park, California.

8
9 Q. "Oversight" shall mean inspection by the EPA, the United
10 States Army Corps of Engineers (USACE), the State, or their
11 representatives, of remedial work and all other actions necessary
12 to verify the adequacy of performance of activities and reports
13 relating to the OII Site.

14
15 R. "Parties" shall mean the United States, the State and
16 the Defendants.

17
18 S. "Plaintiffs" shall mean the United States, the State,
19 and the California Hazardous Substance Account.

20
21 T. "Plan(s)" shall mean the plans developed by the Work
22 Defendants which detail the elements of Work to be conducted
23 pursuant to this Decree.

24
25 U. "Records of Decision" or "RODs" shall mean the documents
26 signed by the EPA Region IX Deputy Regional Administrator on July
27 31, 1987, and November 16, 1987 which describe the remedial

28 ///

1 actions of two of the Operable Units to be conducted at the Site,
2 and which are attached hereto as Appendices A and B.

3
4 V. "Release" shall mean any spilling, leaking, pumping,
5 pouring, emitting, emptying, discharging, injecting, escaping,
6 leaching, dumping, or disposing into the environment (including
7 the abandonment or discarding of barrels, containers, and other
8 closed receptacles containing any hazardous substance or
9 pollutant or contaminant) as defined in Section 101(22) of
10 CERCLA, and California Health and Safety Code §§ 25320 and 25321.

11
12 W. "Report(s)" shall mean the reports developed by the Work
13 Defendants in compliance with this Decree, detailing the Work and
14 the results of its implementation.

15
16 X. "State" shall mean the State of California on behalf of
17 the Department of Health Services.

18
19 Y. "United States" shall mean the United States of America.

20
21 Z. "USACE" shall mean the United States Army Corps of
22 Engineers.

23
24 AA. "Work" shall mean performance of the remedial
25 alternatives selected in the Leachate Management and the Site
26 Control and Monitoring RODs, and actions approved pursuant to the
27 provisions of Section IX (Work to be Performed) herein, and
28 Appendix C.

1 BB. "Work Completion Report" shall mean the report developed
2 by the Work Defendants in compliance with this Decree, detailing
3 the Work performed pursuant to this Decree.

4
5 VIII. PAYMENTS BY CASH DEFENDANTS
6

7 Each Cash Defendant listed in Attachment A shall make
8 payments to EPA and the State as set forth in Attachment A.
9 Except as specifically provided for in Attachment A, all payments
10 shall be made within thirty (30) days of notice of entry of this
11 Decree.
12

13 Any such payments set forth in Attachment A not scheduled to
14 be paid within thirty (30) days of notice of entry of this Decree
15 shall be secured by a surety bond, a letter of credit or other
16 security device acceptable to EPA, which shall be delivered to
17 EPA within thirty (30) days of notice of entry of this Decree.
18 The payments of such amounts shall fully relieve each Cash
19 Defendant of its responsibility for Covered Matters and shall
20 entitle each Cash Defendant to Contribution Protection under
21 Section XXIX (Contribution Protection) and to the Covenant Not to
22 Sue under Section XXX (Covenant Not to Sue) with respect to all
23 such Covered Matters, whether or not the other Defendants fulfill
24 their obligations under this Decree. If EPA and the State do not
25 receive all payments on behalf of any Cash Defendant under this
26 Decree, that Defendant shall not be entitled to any benefits of
27 this Decree, including those under the provisions of Section XXIX
28 (Contribution Protection) and Section XXX (Covenant Not to Sue).

1 The Work Defendants shall have no responsibility to the
2 United States, EPA, the State, the California Hazardous Substance
3 Account, any other Defendant, or any third party for any payment
4 required of, or failure to pay by, any Cash Defendant under this
5 Section.

6
7 IX. WORK TO BE PERFORMED

8
9 A. General Obligations Regarding the Work

10
11 1. The Work Defendants shall finance and perform, as set
12 forth in this Decree, the implementation of the Work as required
13 by this Decree and Attachments and Appendices hereto.

14
15 2. Notwithstanding any approvals which may be granted by
16 the EPA, the State, or other governmental entities, the Work
17 Defendants shall not be relieved of any and all liability, if
18 any, which may arise from or relate to their acts or omissions or
19 the acts or omissions of any of their contractors,
20 subcontractors, or any other person acting on their behalf in the
21 performance of the Work or their failure to perform or complete
22 the Work.

23
24 3. The Work Defendants shall design, implement, and
25 complete the Work in accordance with the NCP, and with the
26 standards, specifications, and schedule of completion set forth
27 in or approved by the EPA pursuant to this Section. The Court
28 finds and the Parties agree that the Records of Decision, as set

1 forth in Appendices A and B, and the Work if performed in
2 compliance with the requirements of this Decree, are consistent
3 with the NCP.
4

5 4. All activities undertaken by any Defendant pursuant to
6 this Decree shall be undertaken in accordance with the
7 requirements of all applicable state and federal laws,
8 regulations, and all "applicable" and "relevant and appropriate"
9 federal and state environmental requirements as identified
10 pursuant to Section XV (Compliance with Applicable Laws and
11 Regulations).
12

13 5. The Work Defendants shall select a contractor or
14 contractors to conduct the Work which has expertise in
15 investigation, analysis and remediation of hazardous waste
16 problems, with particular expertise in site control and
17 monitoring activities as well as the qualifications to design,
18 construct, operate and maintain a leachate treatment plant. All
19 Work performed by the Work Defendants shall be performed by
20 qualified contractors in accordance with the conditions and
21 schedules specified in this Decree. EPA will contract with a
22 qualified person to oversee and review the conduct of the Work
23 performed by Work Defendants.
24

25 6. Except where noted otherwise, all dates referred to in
26 this Decree or any Attachments and Appendices to the Decree are
27 calendar days; however, should a deadline fall on a weekend or a
28 ///

1 federal holiday, the deadline shall be construed to continue to
2 the next business day.

3
4 7. While the Work Defendants may collect, treat, stage, and
5 secure materials on-site, they may only redeposit material back
6 into the Site with the explicit approval of EPA.

7
8 8. The Work Defendants shall dispose of any materials taken
9 off-site in accordance with the EPA's Revised Procedures for
10 Implementing Off-Site Response Actions ("Off-site Policy") (EPA
11 OSWER Directive 9834.11, November 13, 1987), if applicable.

12
13 9. The Work Defendants shall submit all required reports
14 pursuant to the provisions of Appendix C, this Section and
15 Section XVI (Data Exchange).

16
17 10. The treatment facility constructed under the terms of
18 this Decree shall not be used to treat wastes other than those
19 associated with the OII Site.

20
21 11. EPA will make available to Work Defendants relevant EPA
22 Region IX guidance documents.

23
24 12. If EPA disapproves work being performed by Work
25 Defendants, the Work Defendants shall have ten (10) days from
26 receipt of such disapproval, if necessary, to correct the work,
27 or a longer period if deemed appropriate by EPA.

28 ///

1 B. Work To Be Undertaken

2
3 This Work and the applicable schedule and required
4 deliverables are described more fully in the OII Landfill SCM/LMS
5 Scope of Work ("Scope of Work"), attached as Appendix C to this
6 Decree. The Records of Decision for the Operable Units addressed
7 in this Decree are set forth in Appendices A and B. In general
8 terms, the Leachate Management Operable Unit involves design,
9 construction and operation of a Leachate Treatment System (as
10 defined in Appendix C) ("LTS"). The Site Control and Monitoring
11 Operable Unit is intended to stabilize the OII Site during the
12 period before the final remedy for the Site is implemented. It
13 involves operation, monitoring and maintenance of environmental
14 systems at the Site.

15
16 1. Site Control and Monitoring

17
18 The objective of the Site Control and Monitoring ("SCM")
19 activities is to stabilize the OII Site during the period prior
20 to implementation of the final remedy for the Site. These
21 activities include control, maintenance, and monitoring of all
22 systems at the Site, and system improvements. These systems
23 include: gas extraction and the air dike, leachate collection
24 and treatment, irrigation, access roads, stormwater drainage,
25 Site security, and slope repair and erosion control. EPA will
26 retain responsibility for Site security. The SCM activities will
27 be conducted in accordance with the EPA Site Control and
28 ///

1 Monitoring Record of Decision, dated July 31, 1987 (attached
2 hereto as Appendix B).

3
4 2. Leachate Management

5
6 The Leachate Management Operable Unit includes predesign,
7 design, and construction of an onsite leachate treatment plant;
8 and operation of the treatment plant following its completion.
9 The objective of remedial predesign and design is to develop a
10 complete design report, including complete design plans and
11 specifications for a leachate treatment facility and its related
12 facilities, including necessary pipelines. The leachate
13 treatment facility will be located on the north parcel of the OII
14 Site and will be designed consistent with the EPA Leachate
15 Management Record of Decision, dated November 16, 1987 (attached
16 hereto as Appendix A). The on-site treatment facility will be
17 used to treat leachate and other liquids associated with the OII
18 Site. The treatment facility will be designed to provide the
19 flexibility required to treat varying qualities of liquids, and
20 to allow for expansion to treat increased volumes of leachate or
21 other liquids related to the OII Site as needed.

22
23 The objective of leachate treatment plant construction is to
24 construct a complete functional treatment facility, and any
25 related facilities specified in the Final LTS Design, as defined
26 in Appendix C. The Work Defendants shall be responsible for
27 furnishing, in accordance with the Final LTS Design, all plant,
28 labor, equipment, and materials required for the treatment

1 facility, and related facilities at the OII Site, and shall
2 ensure that all facilities are complete and functional.
3

4 Final Design documents for Site Control and Monitoring and
5 Leachate Management, which shall include plans, specifications,
6 construction schedules, and other pertinent information, shall be
7 submitted to EPA in accordance with the schedule in Appendix C of
8 this Decree.
9

10 C. Funding Limitations to Work
11

12 The Parties agree with respect to the Work to be performed
13 under this Section that the Work Defendants' obligation to expend
14 Work Defendants' funds for (1) the Leachate Management System (as
15 described in Appendix C) shall not exceed \$14,000,000 and
16 (2) Site Control and Monitoring not relating to leachate
17 management (as described in Appendix C) shall not exceed
18 \$20,000,000, except as otherwise provided in this Paragraph C.
19

20 In the event that Work Defendants' funds referenced in the
21 previous sentence are exhausted in the performance of the Work to
22 be performed under this Decree, the Work shall also be funded
23 pursuant to the provisions of Section VIII (Payments by Cash
24 Defendants), Section X (Escrow Account) herein and Attachment A
25 hereto, and Work Defendants agree to continue to perform the Work
26 until these additional funds, if any, and any funds received
27 pursuant to EPA's direction or from EPA, if any, are exhausted,
28 or until nine months after the date the ROD for the final Site

1 remedy has been signed, or eight (8) years after the effective
2 date of this Decree, whichever is earliest. Upon the occurrence
3 of the earliest event described in the preceding sentence, the
4 Work Defendants shall have satisfied their obligations for
5 Covered Matters under this Decree, and this Decree shall be
6 terminated as provided in Section XLI (Termination and
7 Satisfaction).

8
9 At the time of EPA approval of the final LTS Closeout
10 Report, as defined in Appendix C, or an EPA determination under
11 Paragraph D of Section XXII (Stipulated Penalties) made six (6)
12 months or longer after EPA approval of the LTS Final Design, as
13 defined in Appendix C, or earlier if agreed to by Work Defendants
14 and EPA, the Work Defendants' funding limitations of \$14,000,000
15 for Leachate Management System and \$20,000,000 for Site Control
16 and Monitoring not related to leachate management shall be
17 consolidated into a \$34,000,000 limit on the obligations of Work
18 Defendants for both Leachate Management and Site Control and
19 Monitoring.

20
21 After eight (8) years after the effective date of this
22 Decree, or nine (9) months after the date the ROD for the final
23 site remedy has been signed, whichever is sooner, should the Work
24 Defendants have expended less than \$34,000,000 for the Work, then
25 the difference between the \$34,000,000 and the amount expended
26 shall be placed in the "Cash" Escrow Account for additional Site
27 remediation work not covered by this Decree and shall be expended
28 as determined by EPA in consultation with the Work Defendants.

1 The following expenditures specifically shall not be
2 allocable against the funding limitations of this Paragraph:

3
4 1. any fines or penalties assessed for non-compliance with
5 the provisions of this Decree or other laws;

6
7 2. Work Defendants' oversight costs including any internal
8 corporate costs, or OII Steering Committee administrative and
9 legal fees (as distinguishable from Work Defendants' Contractor's
10 project management costs, which are so allocable);

11
12 3. costs associated with the judicial resolution of any
13 disputes under Section XXIV (Dispute Resolution);

14
15 4. any costs arising out of claims or the defense of claims
16 for personal injury, property damage, or other third party
17 claims;

18
19 5. the costs of independent technical experts as provided
20 for in Paragraph B of Section XXIV (Dispute Resolution); or,

21
22 6. the costs incurred by EPA resulting from any EPA
23 determination under Paragraph D of Section XXII (Stipulated
24 Penalties).

25
26 Nothing contained in this Paragraph shall preclude Work
27 Defendants from asserting that such expenditures, excluding fines
28 or penalties, are response costs under CERCLA and the NCP.

1 For Work which Work Defendants wish to apply against their
2 funding limitations, annual submittals detailing the costs of
3 such Work shall be provided to EPA as required under this
4 Section IX (Work to be Performed), Section X (Escrow Account),
5 and Appendix C.

6
7 D. Responsibility for Work
8

9 As to the Cash Defendants, the Work Defendants shall have
10 exclusive responsibility for the performance of the Work and the
11 Cash Defendants shall have no responsibility to the United
12 States, EPA, the State, the California Hazardous Substance
13 Account, any other Defendant, or any third party for the
14 performance, or failure of performance, of the Work Defendants.

15
16 X. ESCROW ACCOUNT
17

18 Work Defendants shall establish the "OII Steering Committee
19 Escrow Account - Consent Decree I" (Escrow Account), within ten
20 (10) working days after the effective date of this Decree. The
21 Escrow Account shall have one interest bearing account titled
22 "Work" and one interest bearing account titled "Cash", and these
23 accounts shall be segregated from each other.
24

25 A copy of the Escrow Agreement establishing the Escrow
26 Account shall be sent to EPA and the State as soon as possible
27 thereafter for approval primarily to ensure that the escrowed
28 funds will be handled as set forth by this Decree. Neither EPA,

1 nor the State, through its approval of the terms of the Escrow
2 Account, guarantees the sufficiency of the Escrow Account
3 established by this Section.
4

5 A. Money received from the Work Defendants shall be
6 deposited in the "Work" Escrow Account. The Escrow Agreement
7 shall instruct and authorize the Escrow Manager to disburse the
8 money in the "Work" Escrow Account for the following:
9

10 1. To pay the Work Defendants' contractor(s) for the Work;
11

12 2. To pay for other expenses, including any incurred
13 penalties, required to be paid by the Work Defendants pursuant to
14 this Decree and Attachments hereto;
15

16 3. To reimburse the Hazardous Substance Superfund for
17 \$1,400,000 for past response costs incurred by EPA, as provided
18 in Section XX (Reimbursement of Past Costs) within thirty (30)
19 days of notice of entry of this Decree; and
20

21 4. To reimburse the State for \$500,000 for past response
22 costs incurred by the State, as provided in Section XX
23 (Reimbursement of Past Costs) within thirty (30) days of notice
24 of entry of this Decree.
25

26 The Work Defendants shall deposit \$1,900,000 in the "Work"
27 Escrow Account within thirty (30) days of notice of entry of this
28 Decree.

1 B. Money received from the Cash Defendants listed in
2 Attachment A, Schedule 1 shall be deposited in the "Cash" Escrow
3 Account. The Escrow Agreement shall instruct the Escrow Manager
4 to use the money in the "Cash" Escrow Account for the purposes
5 and in the amounts directed by EPA and as provided for in
6 Attachment A to this Decree. The purposes include the following:
7 reimbursement of EPA future response and oversight costs, past
8 response costs, Work in excess of the Work Defendants' funding
9 limitations pursuant to Paragraph C of Section IX (Work to be
10 Performed), and for additional Site remediation work pursuant to
11 Paragraph C of Section IX (Work to be Performed). Payments to
12 EPA pursuant to this Paragraph B for reimbursement of: (1) EPA
13 past response costs, including interest accrued thereon, as of
14 June 1, 1988, will not exceed these actual costs which EPA
15 currently estimates to be in excess of \$21,500,000; and (2) EPA
16 costs for the oversight of the Work under this Decree will not
17 exceed these actual costs which EPA currently estimates will be
18 \$6,000,000. Use of the "Cash" Escrow Account for Work in excess
19 of Work Defendants' funding limitations and additional Site
20 remediation work, as both are described in Paragraph C of
21 Section IX (Work to be Performed), shall be subject to the same
22 provisions as the use of the "Work" Escrow Account for Work, and
23 the provisions of Paragraph C of Section IX (Work to be
24 Performed).

25
26 C. Other funds received pursuant to EPA's direction or from
27 EPA, if any, shall be placed into the "Cash" Escrow Account.
28 ///

1 D. Interest received on each Escrow Account shall be paid
2 into the account on which it was received, may be used first to
3 pay for the account fees thereon and then shall be used in the
4 same manner and for the same purposes as the other funds in the
5 account.

6
7 E. Payment of money by Defendants to the Escrow Accounts is
8 not a fine, penalty or monetary sanction.

9
10 F. The Escrow Agreement shall require that the Escrow
11 Manager prepare and submit to the Work Defendants monthly
12 statements on money received and disbursements for the prior
13 thirty (30) days for both the "Work" and the "Cash" accounts, and
14 the balances in the accounts as of the date of the statements. A
15 copy of this monthly statement shall be sent promptly to EPA and
16 the State. This monthly statement shall be included in the next
17 monthly progress report, unless a different schedule is agreed to
18 by EPA and the Work Defendants. In addition, within sixty (60)
19 days of the establishment of the Escrow Account, and every ninety
20 (90) days thereafter, in conjunction with the issuance of the
21 most recent regular monthly statement by the Escrow Manager, the
22 Work Defendants shall submit a financial report to EPA and the
23 State. The financial report shall include cash flow projections
24 for the amount of money estimated to be necessary for the "Work"
25 Escrow Account expenses described in Subparagraphs 1 and 2 of
26 Paragraph A of this Section, for the following ninety (90) day
27 period. Subject to the funding limitations in Paragraph C of
28 Section IX (Work to be Performed), if the amount of money in the

1 "Work" Escrow Account is less than the amount projected by the
2 Work Defendants' report to be needed for the following ninety
3 (90) days, Work Defendants shall deposit in the "Work" Escrow
4 Account, within thirty (30) days, sufficient money to bring the
5 level of the "Work" Escrow Account up to the amount projected to
6 be needed for the following ninety (90) days.

7
8 G. Work Defendants shall submit an annual report to EPA and
9 the State which shall include a summary of money received and
10 disbursements for the preceding twelve (12) month period. This
11 financial report also shall identify, in a format corresponding
12 to the SCM/LMS Master Plan described in Appendix C, all expenses
13 incurred which the Work Defendants assert apply against the
14 funding limitations in Paragraph C of Section IX (Work to be
15 Performed).

16
17 H. As provided in Section IX (Work to be Performed), eight
18 (8) years after the effective date of this Decree or nine (9)
19 months after the ROD for the final site remedy has been signed,
20 whichever is sooner, should Work Defendants have expended less
21 than \$34,000,000 for the Work, then the difference between the
22 \$34,000,000 and the amount expended shall be placed in the "Cash"
23 Escrow Account for Site remediation work not covered by this
24 Decree and shall be expended as determined by EPA in consultation
25 with the Work Defendants.

26
27 I. As provided in Section IX (Work to be Performed) and no
28 sooner than the earlier of eight (8) years after the effective

1 date of this Decree or nine (9) months after the date the ROD for
2 the final Site remedy has been signed, or upon termination of the
3 terms of this Decree pursuant to Section XLI (Termination and
4 Satisfaction), or upon Work Defendants' suspension of performance
5 of the Work as described in Paragraph D(1) of Section XXII
6 (Stipulated Penalties), the funds from the "Cash" Escrow Account
7 shall be distributed as directed by EPA. In addition, in any of
8 these events except for suspension of Work Defendants'
9 performance of the Work as described in Paragraph D(1) of Section
10 XXII (Stipulated Penalties), additional funds provided pursuant
11 to Paragraph H of this Section, if any, shall be distributed as
12 directed by EPA.

13
14 XI. WORKER HEALTH AND SAFETY PLAN

15
16 The Worker Health and Safety Plan that the Work Defendants
17 will submit to EPA pursuant to Section IX (Work to be Performed)
18 and Appendix C to this Decree shall satisfy the applicable
19 requirements of the Occupational Safety and Health Guidance for
20 Hazardous Waste Site Activities [October 1985 (DHH 5 NIOSH)
21 Publication No. 85-115] and EPA's Standard Operating Safety
22 Guides (EPA, OERR, November 1984). The Emergency Response Plan
23 that the Work Defendants will submit to EPA pursuant to Section
24 IX (Work to be Performed) and Appendix C to this Decree shall
25 address both workers at the Site and public exposure to releases
26 or spills at and from the Site.

27 ///

28 ///

1. The Parties shall use best efforts to coordinate on-site
2 activity plans.
3

4 XII. QUALITY ASSURANCE/QUALITY CONTROL
5

6 A. The Quality Assurance/Quality Control ("QA/QC") Plan that
7 the Work Defendants shall submit pursuant to Section IX (Work to
8 be Performed) and Appendix C to this Decree shall, where
9 applicable, be prepared in accordance with current EPA guidance,
10 Interim Guidelines and Specifications for Preparing Quality
11 Assurance Project Plans, QAMS-005/80, and relevant EPA Region IX
12 guidance. Additionally, the QA/QC Plan shall include procedures
13 necessary for the implementation of trial test(s) of the pumping,
14 treatment and any other process used as part of the Work. The
15 QA/QC plan shall include a description of the mechanism used to
16 verify that the processes are operating within acceptable limits.
17 Upon approval and notice by EPA to the Work Defendants, the Work
18 Defendants shall implement the Plan.
19

20 B. The Work Defendants shall use QA/QC procedures in
21 accordance with the QA/QC plans submitted pursuant to this
22 Decree, and shall utilize standard EPA chain of custody
23 procedures, as documented in the National Enforcement
24 Investigations Center Policies and Procedures Manual as revised
25 in May 1986, and the National Enforcement Investigations Center
26 Manual for the Evidence Audit, published in September 1981, for
27 all sample collection and analysis activities, unless other
28 procedures are approved by EPA. In order to provide quality

1 assurance and maintain quality control regarding all samples
2 collected pursuant to this Decree, the Work Defendants shall
3 ensure that the following QA/QC measures are employed at
4 laboratories utilized for analyses:

5
6 1. Any laboratory utilized by the Work Defendants for
7 analysis of samples taken pursuant to this Decree shall provide
8 for access of EPA personnel and EPA authorized representatives to
9 assure the accuracy of laboratory results related to the OII
10 Site.

11
12 2. Any laboratory utilized by the Work Defendants for
13 analysis of samples taken pursuant to this Decree shall perform
14 all analyses according to EPA methods or methods deemed
15 satisfactory to EPA and submit all protocols to be used for
16 analysis to EPA in the plans and documents required under this
17 Decree.

18
19 3. All laboratories utilized by the Work Defendants for
20 analysis of samples taken pursuant to this Decree shall
21 participate in an EPA or EPA equivalent QA/QC program. As part
22 of the QA/QC program and upon request by EPA, such laboratories
23 shall perform, at no cost to Plaintiffs, analyses of samples
24 provided by EPA to demonstrate the quality of each laboratory's
25 data.

26 ///

27 ///

28 ///

XIII. PROJECT COORDINATORS

A. By the effective date of this Decree, EPA, the State and the Work Defendants shall each designate a Project Coordinator to monitor the progress of the Work, to coordinate communication among the Parties and to oversee the implementation of this Decree. EPA, the State, and the Work Defendants each have the right to change their respective Project Coordinator. Such a change shall be accomplished by notifying the other Parties in writing at least seven calendar days prior to the change. To the maximum extent possible, communications between the Work Defendants, EPA and the State and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Decree, shall be directed through the Project Coordinators. The role of the State Project Coordinator shall be consistent with the provisions of Paragraphs A and D of Section XXXIV (State and Local Agency Participation), and EPA shall be the lead agency (as defined in the NCP).

The EPA Project Coordinator shall have the authority vested in the On-Scene Coordinator by 40 C.F.R. § 300 et seq., as well as the authority to ensure that the Work is performed in accordance with all applicable statutes, regulations, and this Decree. If the EPA On-Scene-Coordinator and the EPA Project Coordinator are two different individuals, EPA will make its best efforts to coordinate any direction given to the Work Defendants by the On-Scene-Coordinator and the EPA Project Coordinator.

1 The EPA Project Coordinator or On-Scene-Coordinator
2 shall also have the authority to require a cessation of the
3 performance of the Work or any other activity at the Site, if EPA
4 determines that the Work or such activity may present or
5 contribute to an endangerment to public health, welfare, or the
6 environment or cause or threaten to cause the release of
7 hazardous substances from the Site. In the event the EPA Project
8 Coordinator or On-Scene-Coordinator takes any action which
9 results in the delay of the Work or any other activity required
10 by this Decree, the Parties may if necessary extend the
11 compliance schedule of this Decree for only that amount of time
12 which EPA determines is necessitated by the event. Should the
13 Work Defendants desire to extend the compliance schedule pursuant
14 to this Section, the Work Defendants shall propose an extension
15 and the EPA shall determine the length of any extension. If the
16 EPA Project Coordinator takes any action which results in the
17 delay of the Work or any other activity required by this Decree
18 for any of the reasons set forth in this Paragraph and those
19 reasons are due to the acts or omissions of the Work Defendants
20 or the Contractor(s), then any extension of the compliance
21 schedule shall be at EPA's discretion. The absence of the EPA
22 Project Coordinator from the Site shall not be cause for stoppage
23 of the work.

24
25 B. Work Defendants' Project Coordinator shall be
26 responsible for directing the day-to-day activities of Work
27 Defendants and Work Defendants' contractors in the performance of
28 the Work. The Work Defendants' Project Coordinator may assign

1 other representatives, including other contractors, to serve as a
2 site representative for oversight of performance of daily
3 operations during remedial activities.

4
5 C. Prior to invoking formal Dispute Resolution procedures,
6 any unresolved disputes arising between the EPA site
7 representatives and the Work Defendants or their contractors
8 shall be referred to the EPA and Work Defendants' Project
9 Coordinators.

10
11 XIV. SITE ACCESS
12

13 A. To the extent that the Site or other areas where Work is
14 to be performed is presently owned or controlled by parties other
15 than those bound by this Decree or to the extent that access to
16 or easements over property is required for the proper and
17 complete performance of this Decree, the Work Defendants shall
18 use their good faith efforts to obtain access agreements from the
19 present owners or those persons who have control over the
20 property, including lessees. Site access agreements shall
21 provide reasonable access to the Defendants, the Work Defendants'
22 contractor(s), the United States on behalf of EPA and USACE, the
23 State and local agencies, and their authorized representatives.
24 In the event that Work Defendants are unable to obtain necessary
25 access agreements sixty (60) days in advance of the need for such
26 access, Work Defendants shall notify Plaintiffs regarding the
27 lack of and the efforts to obtain such agreements. If Work
28 Defendants fail to gain access within sixty (60) days, they shall

1 continue to use good faith efforts to obtain access. If the
2 Plaintiffs and Work Defendants, through continued joint or
3 individual efforts, are unable to obtain such access, or suitable
4 alternative access, a force majeure event shall be deemed to have
5 occurred, and the affected work shall be modified, if necessary,
6 by mutual agreement of the Work Defendants and Plaintiffs, to
7 take into account the lack of such access.

8
9 To the extent that EPA has control over access to portions
10 of the OII Site, and in light of the fact that EPA intends to
11 continue to provide site security and control access to portions
12 of the Site, EPA agrees to provide reasonable access to those
13 technical representatives of Work Defendants required to carry
14 out the field work detailed in this Decree. Within seven (7)
15 days of the effective date of this Decree, Work Defendants shall
16 provide the EPA Project Coordinator with a list of necessary
17 personnel and their company affiliations, to be added to the list
18 of persons who shall be provided access to the Site. This list
19 can be amended as necessary. Upon request, EPA will provide
20 access to other representatives of Defendants, as is necessary
21 and appropriate.

22
23 B. The EPA, the USACE, the State, and their
24 representatives, including contractors, reserve all rights under
25 Section 104 of CERCLA and, during the effective period of this
26 Decree, shall have access at all times to the Site and, during
27 reasonable times with reasonable notice, to any contiguous
28 ///

1 property owned or controlled by any Defendant, for activities,
2 including but not limited to:

3

4 1. Monitoring the progress of activities taking place;

5

6 2. Verifying any data or information submitted to EPA;

7

8 3. Conducting investigations relating to contamination
9 at and near the Site;

10

11 4. Obtaining samples at the Site.

12

13 As to activities relating to the Site, the EPA, the USACE,
14 the State, and their representatives shall also have access for
15 the purposes of inspecting and copying records, operating logs,
16 contracts, or other documents as specified in Section XVI (Data
17 Exchange).

18

19 Any person obtaining access to the Site pursuant to this
20 provision shall comply with all applicable provisions of the Work
21 Defendants' worker health and safety plan as submitted pursuant
22 to Section XI (Worker Health and Safety Plan) and Appendix C of
23 this Decree.

24

25 XV. COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS

26

27 All actions required to be taken by any Party pursuant to
28 this Decree shall be undertaken in accordance with the

1 requirements of all applicable federal, state, and local laws,
2 and regulations, including the NCP. Work Defendants shall
3 obtain, or cause their contractors to obtain, except as provided
4 in Section 121(e)(1) of CERCLA, all permits and approvals
5 necessary under such laws and regulations.

6
7 XVI. DATA EXCHANGE
8

9 A. The Defendants shall make the results of all sampling
10 and/or tests or other data generated by the Defendants, or on the
11 Defendants' behalf, with respect to the implementation of this
12 Decree available to EPA in accordance with the provisions of this
13 Decree. EPA will make available to the Work Defendants the
14 results of sampling and/or tests or other data similarly
15 generated by EPA.
16

17 B. Under the provisions of Section 104(e) of CERCLA, EPA
18 and the State explicitly reserve the right to observe the Work of
19 the Work Defendants as it is performed. In addition, at the
20 request of EPA or the State, the Work Defendants shall allow
21 split or replicate samples to be taken by EPA or the State and/or
22 their authorized representatives, of any samples collected by the
23 Work Defendants or any one acting on the Work Defendants' behalf
24 pursuant to the implementation of this Decree. To the extent
25 practicable, any such observation and sample collection shall be
26 coordinated through the EPA Project Coordinator. At the request
27 of Work Defendants, Plaintiffs and/or their authorized
28 representatives shall allow Work Defendants to split or replicate

1 any samples collected by Plaintiffs and/or their authorized
2 representatives.

3
4 C. The Party performing sampling for the purposes of
5 implementing this Decree shall notify the other Parties as soon
6 as possible but no less than seven (7) days in advance of any
7 sample collection activity, and the party desiring to take split
8 samples shall inform the other party at least three (3) days
9 prior to the scheduled sampling event. The Party performing the
10 the sampling activity shall inform the other Parties at least
11 twenty-four (24) hours in advance if the planned sampling
12 schedule cannot be met. Notwithstanding the foregoing, within
13 seven (7) days after the approval of any sampling plan (including
14 the schedule for implementation), Work Defendants shall notify
15 Plaintiffs of the intended date of commencement of the sampling
16 activity. EPA shall be notified thirty (30) days prior to the
17 disposal of any such samples, and EPA shall have an opportunity
18 to take possession of all or a portion of such samples.

19
20 D. The Work Defendants need not provide EPA with seven (7)
21 day notice of routine sampling relating to the operation of the
22 treatment system; however, the Work Defendants shall provide EPA
23 with a schedule for all routine sampling. The Work Defendants
24 shall notify EPA seven (7) days in advance of any changes in the
25 routine sampling schedule. The Work Defendants need not provide
26 EPA with advance notice of changes in the treatment system
27 routine sampling as a result of unexpected conditions. The Work
28 Defendants shall, however, notify EPA within forty-eight (48)

1 hours of such occurrence and shall provide EPA with the results
2 of analysis of such sampling when the results become available.

3
4 E. Plaintiffs and Defendants agree to exchange technical
5 data and information relating to environmental and public health
6 issues, site conditions, site use and history, and regional
7 environmental conditions relating to the performance of the Work
8 or which would be covered by the provisions of Section 104 of
9 CERCLA, as such data and information becomes available, including
10 but not limited to:

- 11
- 12 1. Raw analytical, monitoring, sampling, geographical,
13 hydrogeological, geologic, meteorological, surface
14 water, landfill gas, subsurface gas, or ambient air
15 data, resulting from any environmental testing relating
16 to the OII Site;
 - 17
 - 18 2. Technical working drafts and final reports, letter
19 reports, work plans, documents, memoranda, status
20 reports, and written material, any of which are
21 developed using data generated by the Work Defendants
22 as part of the implementation of this Decree or
23 generated by Plaintiffs relating to the OII Site;
 - 24
 - 25 3. All technical maps, computer generated graphics,
26 charts, tables, data sheets, geologic cross-sections,
27 lithologic logs, graphs, photographs, slides, or

28 ///

1 other such material developed relating to the OII
2 Site; and
3

- 4 4. Computerized compilations of technical data and
5 information relating to the OII Site, including
6 the display and organization of data bases.
7

8 Summaries and tabulations of laboratory data may be reviewed for
9 clerical and gross laboratory handling errors prior to submission
10 pursuant to this Paragraph.
11

12 F. The Parties shall provide notice in a timely manner of
13 any project which is likely to produce data or information
14 subject to this Section.
15

16 G. Defendants recognize that the data and reports generated
17 under this Decree are not subject to the protection of
18 Section 1905 of Title 18 and 40 C.F.R. Part 2 as confidential
19 information. Moreover, the Parties explicitly recognize that the
20 provisions of Section 104(e)(7)(F) of CERCLA apply to data and
21 information generated by the Defendants. The Work Defendants
22 shall not assert a claim of confidentiality regarding any
23 hydrogeological or chemical data, or any data submitted in
24 support of the Work. Defendants reserve their rights to assert a
25 confidentiality claim for all other information pursuant to
26 Section 1905, Title 18 and 40 C.F.R. Part 2, and any applicable
27 state laws and regulations. The provisions of this Section shall
28 not constitute a waiver of any applicable claims of attorney work

1 product or attorney client privilege. In addition, the United
2 States reserves all its rights with regard to information
3 otherwise not subject to disclosure under applicable law. The
4 State is not obligated to provide any materials pursuant to this
5 Section which are subject to applicable attorney work product
6 claims, attorney-client privilege, or which the State is not
7 required to disclose under California Government Code Section
8 6254, except that Section 6254(b) shall not apply to the extent
9 that the State has made requested materials available to parties
10 to any pending litigation.

11
12 H. All data, factual information, and documents submitted
13 by the Defendants to EPA and the State pursuant to this Decree
14 and determined by EPA or the State, as appropriate, not to be
15 confidential shall be subject to public inspection.

16
17 I. If any of the Cash Defendants wish to perform any
18 sampling activity on or contiguous to the Site, they shall first
19 provide notice to the Project Coordinators and obtain permission
20 from EPA and the contiguous property owner if such owner is a
21 Defendant. In such an event, the provisions of this Section
22 shall apply to that Cash Defendant.

23
24 J. Subject to Paragraph G above, any Cash Defendant shall,
25 at its request in writing, have access to all data, factual
26 information and documentation generated under this Decree or
27 described in Section IX (Work to be Performed) and Appendix C.
28 The cost of copying shall be borne by the Cash Defendant. Any

1 such data, factual information or documents obtained by any Cash
2 Defendant shall be subject to the provisions of this Section.

3
4 XVII. RETENTION OF RECORDS

5
6 The Defendants shall preserve and retain all records and
7 documents now in their possession or control or in the possession
8 or control of their divisions, employees, agents, accountants,
9 contractors or attorneys which relate to the performance of the
10 Work or which would be covered by the provisions of Section 104
11 of CERCLA, regardless of any document retention policy to the
12 contrary, during the pendency of this Decree and for six (6)
13 years after its termination.

14
15 Until this six (6) year period expires, the Defendants shall
16 preserve, and shall instruct all contractors, all contractor's
17 subcontractors, and anyone else acting on the Defendants' behalf
18 at the OII Site to preserve (in the form of originals or exact
19 copies, or in the alternative, microfiche of all originals) all
20 records, documents and information specified above. During this
21 six (6) year period following the termination of this Decree, if
22 requested by EPA or the State, originals or copies of all such
23 records, documents, and information shall be delivered to the EPA
24 and the State Project Coordinators or designees, as appropriate.
25 After this six (6) year period, the Defendants shall notify the
26 EPA and the State no later than sixty (60) calendar days prior to
27 the destruction of any such documents. Upon request by EPA or
28 the State made within thirty (30) days of such notice, the

1 Defendant proposing to destroy records shall make available to
2 the EPA or the State, as appropriate, originals or copies of any
3 such records prior to their destruction. The United States and
4 Defendants are not obligated to provide any materials pursuant to
5 this Section which are subject to applicable attorney work
6 product claims or attorney-client privilege, or both. In
7 addition, the United States reserves all its right with regard to
8 information otherwise not subject to disclosure under applicable
9 law.

10

11 EPA shall preserve and retain all records and documents now
12 in their possession or control or in the possession or control of
13 their divisions, employees, agents, accountants, contractors or
14 attorneys which relate to any field activities at the OII Site
15 performed by EPA, are received under the provisions of
16 Section 104 of CERCLA, or which relate to the performance of the
17 Work under this Decree, as required by the EPA Office of
18 Information Resources Management Document Number 2160, entitled
19 Records Management Manual and the corresponding EPA Records
20 Management Manual, Appendix B, Records Control Schedules.

21

22 The State shall preserve and retain all records and
23 documents now in its possession or control or in the possession
24 or control of its divisions, employees, agents, accountants,
25 contractors or attorneys which relate to the performance of the
26 Work under this Decree or which relate to activities performed or
27 investigations, or enforcement actions taken by the State at the
28 OII Site regardless of any documents retention policy to the

1 contrary, during the pendency of this Decree and for six (6)
2 years after its termination. After such six (6) year period, the
3 State shall notify the Defendants no later than sixty (60)
4 calendar days prior to the destruction of any such documents.
5 Upon request by any Defendant made within thirty (30) days of
6 such notice, the State shall make available to the requesting
7 Defendant originals or copies of any such records prior to their
8 destruction. The State is not obligated to provide any materials
9 pursuant to this Section which are subject to applicable attorney
10 work product claims, attorney-client privilege, or which the
11 State is not required to disclose under California Government
12 Code Section 6254, except that Section 6254(b) shall not apply to
13 the extent that the State has made requested materials available
14 to parties to any pending litigation.

15

16 This Section shall not apply to exact duplicates.

17

18 XVIII. RESERVATION OF RIGHTS

19

20 A. Nothing in this Decree shall constitute or be construed
21 as a covenant not to sue with respect to, or a release from any
22 claim, cause of action, or demand in law or equity, which the
23 Parties may have against any person, as defined in
24 Section 101(21) of CERCLA, 42 U.S.C. § 9601(21) or California
25 Health and Safety Code § 25319, not a signatory to this Decree.

26

27 B. Notwithstanding compliance with the terms of this
28 Decree, including the completion of EPA approved Work, the

1 Defendants are not released from liability for any matters beyond
2 the terms of this Decree. For matters beyond the terms of this
3 Decree, the United States, EPA and the State reserve the right to
4 take any enforcement action pursuant to CERCLA and/or any other
5 authority, including the right to seek response costs, injunctive
6 relief, monetary penalties, and punitive damages.

7
8 C. Notwithstanding any other provision in this Decree, the
9 Covenant Not to Sue, as provided in Section XXX (Covenant Not to
10 Sue), shall not relieve any Defendant of its obligation to meet
11 and maintain compliance with the requirements set forth in this
12 Decree. The United States, EPA and the State reserve all rights
13 to take enforcement actions for violations of this Decree.

14
15 D. In the event EPA determines that the Work Defendants
16 have failed to implement any provisions of the Work in an
17 adequate or timely manner, or in the event of an imminent or
18 substantial endangerment to the public health or welfare or the
19 environment, EPA may perform any and all portions of the Work as
20 it determines may be necessary, subject to the reimbursement
21 provisions of Paragraphs A and B of Section XIX (Reimbursement of
22 Future Response and Oversight Costs). If the EPA decides to
23 perform work which is the subject of this Decree, the EPA will
24 provide the Work Defendants' and the State's Project Coordinator
25 with advance notice thereof and, to the extent practicable, the
26 opportunity for consultation regarding EPA's intention to perform
27 a portion of or all of the Work. EPA and the State may agree
28 ///

1 that the State may perform work pursuant to the provisions of
2 this Paragraph.

3
4 E. Nothing in this Decree shall be deemed to limit the
5 response authority of EPA under Section 104 of CERCLA, 42 U.S.C.
6 § 9604, and under Section 106 of CERCLA, 42 U.S.C. § 9606, or
7 under any other federal response authority, except to the extent
8 that Defendants have a Covenant Not to Sue for Covered Matters
9 under Section XXX (Covenant Not to Sue). Nothing in this Decree
10 shall be deemed to limit the response authority of the State
11 under Section 25358.3 of the California Health and Safety Code or
12 under any other response authority, except to the extent that
13 Defendants have a Covenant Not to Sue for Covered Matters under
14 Section XXX (Covenant Not to Sue).

15
16 F. Except as provided in Section I (Jurisdiction),
17 Section IV (Binding Effect) and Section XXXVII (Claims Against
18 the Fund), Defendants expressly reserve all legal and equitable
19 rights and defenses that they may have under this Decree, CERCLA,
20 or any other legal authority, including all arguments concerning
21 compliance with the specific tasks and requirements of this
22 Decree. Except as provided in this Decree and Section 113(f)(2)
23 of CERCLA, this reservation of rights applies to all claims,
24 actions and defenses of Defendants against non-settlers, the
25 United States, the State of California, EPA or any others and to
26 those assertable between and among the individual Defendants.
27 Except as provided in Section XXVIII (Defendants' Right of
28 Contribution and Indemnity and Covenant Not to Sue Each Other)

1 and Section XXXVII (Claims Against the Fund), or otherwise in
2 this Decree, these rights include, but are not limited to, the
3 right to seek reimbursement for response actions taken and
4 response costs paid by any of the Defendants at any time.
5

6 G. Defendants reserve any and all rights of contribution
7 from any or all persons who are not Defendants as defined herein
8 for all costs incurred by Defendants under this Decree or
9 otherwise complying with the requirements of this Decree.
10 Nothing in this Decree shall be construed as limiting Defendants'
11 right to seek contribution from any or all liable persons who are
12 not Defendants.
13

14 H. In reaching this settlement, the Parties looked to a
15 calculation which did not specifically address individual
16 defenses or hazardous substances deposited by persons not parties
17 to this Decree. Rather, the Parties have allocated costs in a
18 general fashion reflective both of the volumes of wastes
19 deposited at the Site by the Defendants and of the nature of each
20 Defendant's participation in this Decree. If an allocation is
21 performed at the time a final remedy has been chosen, for the
22 purpose of resolving any liability remaining at that time, and if
23 it is determined that a Defendant's relative share of liability
24 (expressed as a percentage) is less than what was calculated for
25 the purposes of this settlement, as reflected in Attachment C,
26 the payment otherwise required in the resolution of final site
27 liability should be reduced by an amount corresponding to the
28 Percentage Reduction of a Defendant's relative share of liability

1 times either the amount paid by a Cash Defendant, or the amount
2 paid and the value of Work performed in accordance and in full
3 compliance with this Decree, by a Work Defendant in this
4 settlement. The Percentage Reduction should be determined by
5 dividing a Defendant's reduction in relative share of liability
6 determined by an allocation made, if any, at the time of final
7 settlement by that Defendant's relative share of liability among
8 Defendants as reflected in Attachment C.

9
10 For purposes of this Paragraph H, the value of Work
11 performed for each Work Defendant shall be the greater of the
12 value of all costs incurred consistent with the NCP (excluding
13 penalties) in performing the Work pursuant to this Decree, or an
14 amount equal to \$11,500 per 0.01% for the volume indicated for
15 that Work Defendant in Attachment C. Notwithstanding the above,
16 it is intended that any reallocation to "non-noticed PRPs"
17 resulting from the application of any credit pursuant to this
18 Paragraph H shall be based upon the amount of the credit which is
19 reflected by the payments made by the Cash Defendants and the
20 amount paid and the actual costs to the Work Defendants in
21 performing the Work consistent with the NCP (excluding
22 penalties). "Non-noticed PRPs" shall mean any potentially
23 responsible party under Section 107(a) of CERCLA which has not
24 been notified by EPA of its status as a potentially responsible
25 party at the OII Site as of the effective date of this Decree.

26
27 The Parties agree that this credit provision will not apply
28 if the use of the credit would result in the United States or the

1 State of California not recovering their total costs for the
2 final Site remedy. The Parties further agree that this provision
3 shall not be construed as any restriction of joint and several
4 liability under CERCLA, nor shall it be construed as any
5 commitment on the part of the United States to use the Hazardous
6 Substance Superfund to pay for any portion of the cost of the
7 final remedy or any other response activities. In addition, this
8 Paragraph H shall not restrict, in any way, the United States' or
9 EPA's or the State's ability to recover those costs not recovered
10 under this Decree from the appropriate persons potentially liable
11 under Section 107 of CERCLA. In the event that the United States
12 or the State reach a settlement with some or all of the
13 appropriate potentially responsible persons under Section 107 of
14 CERCLA regarding their ultimate liability for costs incurred or
15 work to be performed at the OII Site on any terms, this Paragraph
16 H shall not be the basis for an objection to such settlement or a
17 motion for entry of any future Consent Decree by any signatory to
18 this Decree.

19

20 I. In no case shall any Defendant be entitled to a refund
21 or to assert a claim against the Superfund under
22 Sections 106(b)(2) or 112 of CERCLA for any amount paid, or
23 expended, under this Decree even if that Defendant is later
24 determined, based upon its assertion of defenses in a subsequent
25 proceeding, to be not liable for response costs for the Site or
26 to be liable for response costs less than those paid, or
27 expended, pursuant to this Decree.

28 ///

1 J. Nothing in this Section shall limit any Defendant's
2 right to a Covenant Not to Sue under Section XXX (Covenant Not to
3 Sue) or Contribution Protection under Section XXIX (Contribution
4 Protection) for all Covered Matters.
5

6 XIX. REIMBURSEMENT OF FUTURE RESPONSE AND OVERSIGHT COSTS
7

8 A. The Work Defendants shall reimburse EPA's Hazardous
9 Substance Superfund or the State for the costs incurred for any
10 activities outlined in Section IX (Work to be Performed) which
11 are performed by EPA or the State, pursuant to the provisions
12 Paragraph D of Section XVIII (Reservation of Rights). These costs
13 shall be subject to the funding limitations of Paragraph C of
14 Section IX (Work to be Performed). The Work Defendants shall,
15 within thirty (30) calendar days of receipt of demand for
16 payment, remit a check for the amount of those costs made payable
17 to the Hazardous Substance Superfund, or the Department of Health
18 Services, as appropriate.
19

20 B. Reimbursement under this Section shall also be required
21 in the event that EPA determines that Work Defendants have failed
22 to perform any material portion of the Work or have performed any
23 portion of the Work in a substantially inadequate or
24 substantially untimely manner, or in the event of an imminent and
25 substantial endangerment to public health or welfare or the
26 environment resulting from the performance of, or failure to
27 perform, Work by the Work Defendants. If EPA or the State
28 assumes performance of any portion of the Work based on such a

1 determination, the Work Defendants shall, within thirty (30)
2 calendar days of receipt of demand for payment, remit a check for
3 the amount of those costs made payable to the Hazardous Substance
4 Superfund or the DHS, as appropriate. In such an event, the
5 funding limitations of Paragraph C of Section IX (Work to be
6 Performed) shall not apply.

7
8 C. Defendants shall reimburse the Hazardous Substance
9 Superfund for the costs incurred by EPA to oversee and review the
10 work under this Decree. These payments shall be made in the
11 amounts set forth and as described in Paragraph B of Section X
12 (Escrow Account), Section VIII (Payments by Cash Defendants) and
13 Attachment A to this Decree.

14
15 D. Any payment made pursuant to this Section shall not
16 constitute an admission by Defendants of any liability to EPA,
17 the State or any other person or agency. The checks shall
18 reference the OII Site, and be addressed to:

19
20 U.S. Environmental Protection Agency
21 Superfund Accounting
22 P.O. Box 371003M
23 Pittsburgh, PA 15251
24 Attn: Collection Officer for Superfund

25 ///
26 ///
27 ///
28 ///

1 or, as appropriate:

2
3 California Department of Health Services
4 Toxics Substances Control Division
5 P.O. Box 942732
6 Sacramento, CA 94234-7320
7

8 A copy of the transmittal letter and a copy of the check
9 shall be sent to the EPA or State Project Coordinator, as
10 appropriate.
11

12 XX. REIMBURSEMENT OF PAST COSTS
13

14 A. Defendants agree to reimburse the Hazardous Substance
15 Superfund for certain past response costs which have been
16 incurred by EPA in responding to the conditions at the OII Site,
17 including costs for emergency response actions which have been
18 taken at the OII Site, remedial investigation activities
19 performed by EPA and its contractor, and site control and
20 monitoring activities. EPA will provide Defendants with a copy
21 of the appropriate SPUR (Software Package for Unique Reports,
22 EPA's Superfund accounting system document) which provides an
23 accounting of its costs for the period up to and including
24 June 1, 1988. EPA will also provide a summary accounting of its
25 indirect and interest cost calculations. These reimbursements
26 shall be made in the amounts set forth and as described in
27 Section VIII (Payments by Cash Defendants), Section X (Escrow
28 Account) and Attachment A to this Decree. Work Defendants shall

1 pay \$1,400,000 in EPA past response costs, as provided for in
2 Section X (Escrow Account). A copy of all transmittal letters
3 and a copy of all checks shall be sent to the EPA Project
4 Coordinator.

5
6 B. Defendants agree to reimburse the State of California
7 Hazardous Substance Account for certain past response costs which
8 have been incurred by the State in responding to conditions at
9 the OII Site. The State will provide the Defendants an
10 accounting of its costs for the period up to and including
11 June 1, 1988. These payments shall be made in the amounts set
12 forth as described in Section VIII (Payments by Cash Defendants),
13 Section X (Escrow Account) and Attachment A to this Decree. Work
14 Defendants shall pay \$500,000 in past response costs, as provided
15 for in Section X (Escrow Account). A copy of the transmittal
16 letter and a copy of the check shall be sent to the State Project
17 Coordinator.

18
19 C. Such payments by Defendants to the EPA and the State as
20 provided in Paragraphs A and B above, are not a penalty, fine or
21 monetary sanction of any kind.

22
23 XXI. PRIORITY OF CLAIMS
24

25 In any contribution action, the rights of any Defendant
26 shall be subordinate to the rights of the United States or the
27 State, pursuant to the provisions of Section 113(f)(3)(C) of
28 CERCLA.

1 XXII. STIPULATED PENALTIES

2
3 A. General Provisions

4
5 1. Stipulated penalties shall apply for untimely or
6 inadequate submittals or Work required under the terms of this
7 Decree except where due to the occurrence of a force majeure
8 event, pursuant to Section XXIII (Force Majeure). Penalties
9 shall apply from the first day after the deadline for performance
10 of a requirement of this Decree until the requirement is
11 satisfied.
12

13 2. For inadequate submittals or Work, EPA shall provide to
14 Defendants, as soon as possible, oral notification of the
15 occurrence of an event which triggers stipulated penalties, with
16 written confirmation within seven (7) days of the occurrence of
17 that event. In the event that EPA fails to so notify Defendants,
18 stipulated penalties shall accrue from the date on which
19 Defendants receive such notice.
20

21 3. Stipulated penalties under this Paragraph shall be paid
22 upon demand, by certified check made payable to the Hazardous
23 Substance Superfund, and addressed as indicated in Section XIX
24 (Reimbursement of Future Response and Oversight Costs) and shall
25 be paid within thirty (30) days of receipt of the demand for
26 payment of stipulated penalties. Failure to pay a stipulated
27 penalty on time shall also constitute such an event subject to
28 stipulated penalties. A copy of the check and the letter

1 forwarding the check, including a brief description of the
2 triggering event, shall be submitted to the United States in
3 accordance with Section XXV (Form of Notice), herein.
4

5 4. Notwithstanding the stipulated penalties provisions of
6 this Section, and to the extent authorized by law, EPA or the
7 State may elect to assess civil penalties or bring an action in
8 District Court to enforce the provisions of this Decree. Payment
9 of stipulated penalties shall not preclude EPA or the State from
10 electing to pursue any other remedy or sanction to enforce this
11 Decree, and nothing shall preclude EPA or the State from seeking
12 statutory penalties against the Work Defendants for violations of
13 statutory or regulatory requirements relating to the performance
14 of the Work under this Decree, provided that the total shall not
15 exceed \$25,000 per day per violation.
16

17 5. In the event the EPA or the State assumes the
18 performance of a portion or all of the Work, pursuant to
19 Section XVIII (Reservation of Rights), the Work Defendants would
20 be liable for stipulated penalties pursuant to this Section. As
21 provided for in Paragraphs A and B of Section XIX (Reimbursement
22 of Future Response and Oversight Costs), if EPA or the State
23 performs all or portions of the Work because of the Work
24 Defendants' failure to comply with their obligations under this
25 Decree, the Work Defendants shall reimburse the EPA or the State
26 for the costs of doing such work within thirty (30) days of
27 receipt of demand for payment of such costs, plus penalties,
28 pursuant to Paragraphs C or D of this Section, as applicable.

1 6. The Work Defendants are jointly and severally liable for
2 any stipulated penalties pursuant to the provisions of this
3 Section provided, however, that the total amount due and payable
4 for each day of each violation shall not exceed those limits
5 specified in this Section.

6
7 7. Work Defendants may invoke the dispute resolution
8 procedures set forth in Section XXIV (Dispute Resolution) in any
9 case that results in stipulated penalties based on a
10 determination of inadequacy including any determination of
11 inadequacy by EPA pursuant to Paragraph D of Section XVIII
12 (Reservation of Rights). Invoking the dispute resolution process
13 shall not toll or suspend the accrual of stipulated penalties,
14 subject to the provisions of Section XXIV (Dispute Resolution).

15
16 B. Monthly Progress Reports
17

18 1. The Work Defendants shall provide written monthly
19 progress reports to EPA as described in Appendix C. These
20 monthly progress reports shall describe all actions taken to
21 comply with this Decree during this reporting period, including a
22 general description of Work commenced or completed during the
23 reporting period, Work projected to be commenced or completed
24 during the next reporting period, any problems that have been
25 encountered or are anticipated by the Work Defendants in
26 commencing or completing the Work, and shall also include the
27 monthly statements for the Escrow Accounts as described in
28 Paragraph F of Section X (Escrow Account). These monthly

1 progress reports shall be submitted to EPA by the
2 fourteenth (14th) day of each month, and should cover the work
3 done the preceding calendar month and planned for the current
4 calendar month.

5
6 2. If a submitted monthly progress report is inadequate, or
7 if the Work Defendants fail to submit any monthly progress report
8 in accordance with the schedule set forth above, then the Work
9 Defendants shall be considered to be in violation of this Decree
10 and subject to stipulated penalties as governed by this Section.

11
12 3. The Work Defendants shall pay stipulated penalties of
13 \$1,000 per day for the submission of inadequate or late monthly
14 progress reports as called for in this Section.

15
16 C. Work to be Performed and All Other Deliverables
17

18 1. Any reports, plans, specifications (including discharge
19 or emission limits), schedules, appendices, and attachments
20 required by this Decree are, upon approval by EPA, incorporated
21 into this Decree. Any noncompliance with such EPA approved
22 reports, plans, specifications (including discharge or emission
23 limits), schedules, appendices, and attachments shall be
24 considered a failure to comply with this Decree and subject to
25 stipulated penalties as governed by this Section. In the event
26 Work Defendants exceed discharge or emission limits, stipulated
27 penalties shall apply under this Section. EPA may, however, in
28 its sole discretion, determine it is appropriate to forgive or

1 reduce stipulated penalties assessed by EPA under this Decree
2 solely for such exceedences. If Work Defendants pay penalties
3 assessed by a state or local agency for such an exceedance, the
4 amount of such penalties paid will be credited toward any
5 penalties assessed by EPA for the same instance of exceedance.
6

7 2. If EPA disapproves any Work, plans, reports (other than
8 monthly progress reports, which are covered by Paragraph B
9 above), or other items required to be submitted to EPA for
10 approval pursuant to Section IX (Work to be Performed),
11 Section XII (Quality Assurance/Quality Control), or Section X
12 (Escrow Account), the Work Defendants shall have ten 10 days from
13 the receipt of such disapproval to correct any inadequacies and
14 resubmit the plan, report, or item for EPA approval unless a
15 longer period of time is provided by Subparagraph A(12) of
16 Section IX (Work to be Performed) with respect to Work. This
17 Subparagraph C(2) does not apply to Project Proposals, as
18 described in Appendix C.
19

20 3. Any disapprovals by EPA shall include an explanation of
21 why the Work, plan, report, or item is being disapproved.
22

23 4. The Work Defendants must address each of EPA's comments
24 and resubmit to EPA the previously disapproved plan, report, or
25 item with any required changes within the deadline set forth
26 herein.
27

28 ///

///

1 5. If any plan, report, or item is inadequate after
2 resubmission, then the Work Defendants shall be deemed to be in
3 violation of this Decree and subject to stipulated penalties as
4 governed by this Section.

5
6 6. Except for the stipulated penalties specified in
7 Paragraph B, above, the Work Defendants shall pay the following
8 stipulated penalties for each failure to comply with the
9 requirements of this Decree, including but not limited to all
10 implementation schedules and performance and submission dates:

11
12 a. Class I Requirements

13
14 All Outlines

15 Preliminary Designs

16 Intermediate Designs

17 Prefinal Designs

18 All Construction Inspections

19 Draft Construction Close-out Reports.

20 Emergency Repair Close-out Reports

21 Discharge or Emission Exceedences

22 ///

23 ///

24 ///

25 ///

26 ///

27 ///

28 ///

1	<u>Period of Failure</u>	<u>Penalty per Day</u>
2	<u>to Comply</u>	<u>per Event</u>
3		
4	1st through 30th day	\$2,500
5		
6	If an Outline or Report is for a Class II Requirement:	
7	31st through 45th day	\$10,000
8	46th day and beyond	\$15,000
9		
10	If a Design or Construction is for a Class II Requirement:	
11	31st through 45th day	\$5,000
12	46th day and beyond	\$15,000
13		
14	If an Outline, Design, Construction, or Report is for a	
15	Class III Requirement:	
16	31st through 45th day	\$15,000
17	46th day and beyond	\$20,000
18		
19	All other Class I Requirements:	
20	31st day and beyond	\$2,500
21		
22	b. <u>Class II Requirements</u>	
23		
24	All Prefinal Plans	
25	SCM/LMS Master Plan	
26	Operations Manual	
27	Transition Plan	
28	Project Proposal Plan	

1 Bench Scale Testing Plan
 2 LTS Predesign Report
 3 Final Construction Close-out Reports
 4 Quarterly Escrow Reports required by Section X (Escrow
 5 Account)
 6 Work Completion Report
 7 Final Designs (other than LTS Final Design)
 8 Untimely Commencement of Work
 9

10	<u>Period of Failure</u>	<u>Penalty per Day</u>
11	<u>to Comply</u>	<u>per Event</u>
12		
13	1st through 15th day	\$3,000
14	16th through 30th day	\$7,000
15	31st through 45th day	\$10,000
16	46th day and beyond	\$15,000
17		

18 c. Class III Requirements

19
 20 Safety, Health, and Emergency Response Plan
 21 Quality Assurance/Quality Control Plan
 22 Interim Budget and Operations Plan
 23 Final LTS Close-out Report
 24 LTS Final Design

25 ///
 26 ///
 27 ///
 28 ///

1	<u>Period of Failure</u>	<u>Penalty per Day</u>
2	<u>to Comply</u>	<u>per Event</u>
3		
4	1st through 15th day	\$5,000
5	16th through 30th day	\$10,000
6	31st through 45th day	\$15,000
7	46th day and beyond	\$20,000

8

9 d. All deliverables and Work not identified in Paragraph B

10 or Subparagraph (6)(a) through (6)(c) of this Paragraph C shall

11 be Class II Requirements.

12

13 D. Stipulated Penalties for Special Circumstances

14

15 1. If EPA determines that Work Defendants have suspended

16 performance of all or a portion of the Work, unless otherwise

17 allowed by the terms of this Decree, they shall be deemed to be

18 in violation of this Decree and shall pay a stipulated penalty of

19 \$3,000,000, in lieu of other stipulated penalties for that

20 specific violation.

21

22 2. In the event that EPA determines that Work Defendants

23 have failed to perform any material portion of the Work or have

24 performed any portion of the Work in a substantially inadequate

25 or substantially untimely manner, or in the event of an imminent

26 and substantial endangerment to public health or welfare or the

27 environment resulting from the performance of, or failure to

28 perform, Work by Work Defendants, Work Defendants shall pay a

1 stipulated penalty of \$1,000,000, in lieu of other stipulated
2 penalties for that specific violation.

3
4 3. The costs incurred by EPA resulting from an EPA
5 determination under Subparagraphs 1 and 2 of this Paragraph D
6 shall not be allocable against the funding limitations of
7 Paragraph C of Section IX (Work to be Performed), as provided in
8 Paragraph B of Section XIX (Reimbursement of Future Response and
9 Oversight Costs).

10
11 E. Stipulated Penalties for Cash Defendants

12
13 Each Cash Defendant's obligation for payment of stipulated
14 penalties shall be limited to its obligation to make payments
15 pursuant to Section VIII (Payments by Cash Defendants), Section X
16 (Escrow Account) and Attachment A to this Decree. The amount of
17 the penalties for any untimely payment or payment of less than
18 the full amount due under this Decree shall be \$25,000 per day.
19 Payments shall be made in accordance with Paragraph A of this
20 Section.

21
22 XXIII. FORCE MAJEURE

23
24 For purposes of this Decree, force majeure is defined as any
25 event arising from causes beyond the control of the Work
26 Defendants, or their contractors, subcontractors or consultants
27 which delays or prevents the performance of any obligation under
28 this Decree, and could not have been overcome or prevented by the

1 Work Defendants' due diligence efforts. The Work Defendants
2 shall have the burden of proving that the delay was caused by
3 circumstances beyond the control of the Work Defendants.
4

5 When circumstances are occurring or have occurred that delay
6 or may delay the completion of any phase of the Work, and the
7 Work Defendants wish to invoke the provisions of this Section,
8 the Work Defendants shall, as soon as possible, notify EPA's
9 Project Coordinator orally and shall, within seven (7) calendar
10 days of oral notification to EPA, notify the EPA and the State
11 Project Coordinators in writing of the anticipated length and
12 cause of the delay, and to the extent possible, the following:
13 which of the tasks are directly affected by the delay; the
14 measures taken and/or to be taken to prevent or minimize the
15 delay; and the timetable by which the Work Defendants intend to
16 implement these measures. Failure of the Work Defendants to
17 comply with the notice requirements of this Section shall
18 constitute a waiver of that claim of force majeure.
19

20 Force majeure shall not include increased costs or expenses
21 of any of the Work to be performed under this Decree, nor the
22 financial inability of any of the Work Defendants to perform such
23 Work, nor the failure of Work Defendants to make timely
24 application for any required permits or approvals, and to provide
25 all information required therefor in a timely manner. The EPA
26 shall determine whether the event constitutes force majeure.
27

27 ///

28 ///

1 If EPA determines that the event did not constitute force
2 majeure, and the delay was not beyond the control of the Work
3 Defendants, this delay shall constitute non-compliance with the
4 Decree, and penalties shall accrue from the time of
5 noncompliance. If the EPA determines the event does constitute
6 force majeure, it shall, in consultation with the Work
7 Defendants, determine the appropriate modification to the
8 schedules in the Plans. No deadline shall be extended beyond
9 that period of time which is necessary to complete the activities
10 with the least amount of delay possible. The Work Defendants
11 shall adopt all practicable measures to avoid or minimize delay.
12

13 If the EPA and the Work Defendants cannot agree as to
14 whether the reason for the delay was a force majeure event, the
15 determination of the EPA shall control. If the Work Defendants
16 dispute this determination, the dispute shall be resolved by the
17 procedures outlined in Section XXIV (Dispute Resolution) of this
18 Decree.
19

20 The Cash Defendants shall not invoke the provisions of this
21 Section.
22

23 XXIV. DISPUTE RESOLUTION
24

25 As required by Section 121(e)(2) of CERCLA, the United
26 States, EPA, the State and the Work Defendants shall attempt to
27 resolve expeditiously and informally any disagreements arising
28 ///

1 under or from the implementation of this Decree or any Work
2 required hereunder.

3
4 If a dispute arises with respect to the meaning or
5 application of this Decree, it shall in the first instance be the
6 subject of informal good faith negotiations between EPA and the
7 Work Defendants, pursuant to Paragraph B of this Section. The
8 State may participate in these negotiations, consistent with the
9 provisions of Paragraphs A and D of Section XXXIV (State and
10 Local Agency Participation). In the event that the parties
11 concerned cannot resolve any dispute arising under this Decree,
12 then the interpretation advanced by EPA shall be considered
13 binding unless the Work Defendants invoke the dispute resolution
14 provisions of this Section. The Work Defendants' decision to
15 invoke dispute resolution shall not constitute a force majeure
16 under Section XXIII (Force Majeure), herein. The Work Defendants
17 reserve the right to dispute a determination regarding whether a
18 force majeure has occurred.

19
20 A. Notice

21
22 If the Work Defendants raise a good faith objection to any
23 EPA notice of disapproval, determination of inadequacy, or other
24 decision made pursuant to this Decree, or if the Work Defendants
25 conclude that EPA and the Work Defendants have otherwise reached
26 an impasse with regard to the requirements of this Decree, the
27 Work Defendants shall orally notify EPA immediately of their
28 objections. The Work Defendants shall subsequently provide

1 written notice to EPA and the State within seven (7) calendar
2 days of oral notification.

3
4 B. Informal Resolution Mechanism
5

6 EPA and the Work Defendants shall then have fourteen (14)
7 additional calendar days from the receipt by either party of the
8 written notification to reach agreement. DHS may participate in
9 these negotiations, consistent with the provisions of Paragraphs
10 A and D of Section XXXIV (State and Local Agency Participation).
11 If possible, such disputes shall be resolved by informal
12 telephone conferences. Any Party may also request that the
13 Parties confer to resolve the dispute through an informal
14 conference, to be held within this fourteen (14) calendar day
15 period. As appropriate, and upon agreement of the EPA, the State
16 and the Work Defendants, they may use independent technical
17 experts to assist in the resolution of solely technical disputes,
18 provided however that there is no written finding or
19 determination made by such technical expert. No product or
20 recommendation resulting from this consultation shall be offered
21 in evidence for any purpose in any proceeding. The Work
22 Defendants agree to pay for such independent experts and any such
23 costs shall be excluded from the limitations on expenditures set
24 forth in Paragraph C of Section IX (Work to be Performed).
25

26 At the end of this fourteen (14) calendar day period, or
27 within seven (7) calendar days after an informal conference is
28 held, whichever is later, EPA shall provide the Work Defendants

1 and the State a written statement of its decision signed by the
2 Superfund Enforcement Branch Chief, or his/her designee other
3 than the Project Coordinator, and the Work Defendants shall
4 implement the directives contained in such decision, subject to
5 the provisions of Paragraph C of this Section. If the Work
6 Defendants refuse to implement such directives, EPA or the State
7 may elect to perform such work, pursuant to Section XVIII
8 (Reservation of Rights), infra. If Paragraph C of this Section
9 is invoked, Plaintiffs may also elect to perform the work
10 required by the disputed directive, as provided in Section XVIII
11 (Reservation of Rights), and subject to Paragraphs A or B of
12 Section XIX (Reimbursement of Future Response and Oversight
13 Costs) and Section XXII (Stipulated Penalties).
14

15 C. Judicial Resolution
16

17 In the event that the dispute cannot be resolved by the
18 informal negotiation procedures outlined in Paragraphs A and B
19 above, and should the Work Defendants choose not to follow the
20 EPA position, the Work Defendants may file with the Court a
21 petition which shall describe the nature of the dispute and
22 include a proposal for its resolution. Work Defendants may not
23 file such a petition until informal negotiations pursuant to
24 Paragraph B, supra, are completed. The filing of a petition
25 asking the Court to resolve a dispute shall not of itself extend
26 or postpone the Work Defendants' obligations under this Decree
27 with respect to the disputed issue, or stay the provisions of
28 Section XXII (Stipulated Penalties), except that the EPA will not

1 demand payment of penalties accrued until completion of the
2 dispute resolution process.

3
4 Unless the Court establishes a different period for
5 response, Plaintiffs shall have thirty (30) days to respond to
6 the petition. In a dispute where the Work Defendants allege
7 delay attributable to force majeure, the Work Defendants shall
8 have the burden of demonstrating by a preponderance of the
9 evidence that the delay or anticipated delay has been or will be
10 caused by circumstances beyond their control which could not have
11 been overcome by due diligence, that the duration of the delay is
12 or was warranted under the circumstances, and that the Work
13 Defendants complied with the notice requirements of Section XXIII
14 (Force Majeure). In proceedings on any dispute relating to the
15 selection, technique, cost effectiveness or adequacy of any
16 aspect of the Work and in any other dispute subject to CERCLA
17 Section 113(j)(2), 42 U.S.C. § 9613(j)(2), in considering the
18 Work Defendants' objections, the Court shall uphold EPA's
19 decision unless the Work Defendants can demonstrate, on the
20 administrative record, that EPA's decision was arbitrary and
21 capricious or otherwise not in accordance with law. In other
22 disputes, except as specified above, the appropriate standard of
23 judicial review and scope of materials to be considered by the
24 Court shall be determined by the Court. In any proceedings on a
25 dispute, Work Defendants shall bear the burden of coming forward
26 with evidence and of persuasion on factual issues.

27 ///

28 ///

1 If the Court finds that the Work Defendants have not
2 satisfied their burden, the Work Defendants shall transmit
3 payment of all penalties which have accrued during the dispute,
4 plus interest at the rate specified in Section 107(a) of CERCLA,
5 to the Hazardous Substance Superfund, within fifteen (15) working
6 days of resolution of the dispute. The Work Defendants shall
7 then implement the disputed matter as resolved and perform the
8 work which was the subject of the dispute, if required. The
9 appropriate plans should be amended to reflect the resolution of
10 the dispute.

11
12 In any dispute in which the Work Defendants prevail: (1) the
13 deadlines for any affected deliverables shall be extended to
14 account fully for any delays attributable to the dispute
15 resolution procedures; and (2) any penalties which would
16 otherwise accrue for violation of any affected deliverable shall
17 be waived.

18
19 XXV. FORM OF NOTICE

20
21 All communications between the Work Defendants or their
22 Contractor(s), and EPA and the State made pursuant to this Decree
23 shall be sent to at least the Work Defendants, EPA, and the
24 State. Subject to Paragraph G of Section XVI (Data Exchange),
25 any Cash Defendant may obtain upon written request, a copy of any
26 or all such communications. The cost of copying any such
27 material shall be borne by the Cash Defendant making the request.
28 ///

1 When notification to or communication with the United
2 States, EPA, the Work Defendants, or the State is required by the
3 terms of this Decree, it shall be in writing, postage prepaid,
4 and addressed as follows:

5
6 As to the United States:

7
8 Chief
9 Environmental Enforcement Section
10 Land and Natural Resources Division
11 Department of Justice
12 10th and Pennsylvania Avenue, N.W.
13 Washington, D.C. 20530
14

15 As to EPA:

16
17 EPA Project Coordinator - OII Site
18 Superfund Enforcement Section (T-4-2)
19 U.S. Environmental Protection Agency
20 215 Fremont Street
21 San Francisco, CA 94105
22

23 Assistant Regional Counsel - OII Site
24 Office of Regional Counsel
25 U.S. Environmental Protection Agency
26 215 Fremont Street
27 San Francisco, CA 94105
28

///
28

1 As to the Work Defendants:
2
3 Susan Spencer
4 Chevron U.S.A., Inc.
5 6001 Bollinger Canyon Road
6 P.O. Box 5043
7 San Ramon, CA 94583-0943
8
9 David A. Giannotti, Esq.
10 McKenna, Conner & Cuneo
11 444 South Flower Street
12 Los Angeles, CA 90071
13
14 J. Jeffrey Zimmerman, Esq.
15 Occidental Petroleum Corporation
16 1747 Pennsylvania Ave. N.W.
17 Washington, D.C. 20006
18
19 OII Work Defendant Project Coordinator
20 Boone & Associates
21 901 Corporate Center Drive
22 Monterey Park, CA 91754
23 ///
24 ///
25 ///
26 ///
27 ///
28 ///

1 As to the State:

2

3

OII Project Coordinator

4

Department of Health Services

5

Toxic Substances Control Division

6

107 South Broadway, Room 7011

7

Los Angeles, CA 90012

8

9

XXVI. MODIFICATION

10

11

12

13

14

Except as provided for in this Decree, there shall be no modification of this Decree without written approval of EPA, the State, the Defendants and the Court, or as ordered by the Court.

15

XXVII. ADMISSIBILITY OF DATA

16

17

18

19

20

21

22

23

For the purpose of this action only, the Parties waive any evidentiary objection as to the authenticity of data gathered, generated, or evaluated by any Party in the performance or oversight of the Work under this Decree that has been verified using the Quality Assurance and Quality Control procedures specified in Section XII (Quality Assurance and Quality Control).

24

25

26

27

28

The Parties also waive any objections to the introduction of such data based on hearsay for the purpose of this action only.

///

///

///

1 XXVIII. DEFENDANTS' RIGHT OF CONTRIBUTION AND
2 INDEMNITY AND COVENANT NOT TO SUE EACH OTHER
3

4 A. Each Defendant shall retain all rights under statutory or
5 common law to seek contribution or indemnification against any
6 and all other persons or entities not party to this Decree.
7

8 B. Except as provided in this Paragraph, to the extent that
9 any Defendant has complied with its obligations hereunder, and,
10 as among the Work Defendants only, with its obligations under any
11 separate agreement allocating the costs hereof, no rights as to
12 matters addressed in this Decree are retained against such
13 Defendant by any other Defendant and such rights are hereby
14 expressly waived, released and discharged with regard to such
15 Defendant. Each Cash Defendant specifically retains any and all
16 rights to seek indemnification from the Work Defendants as
17 provided in Paragraph B of Section XXXVI (Indemnification).
18

19 C. For and in consideration of the mutual covenants and
20 promises of the Defendants made herein and, as to the Work
21 Defendants only, in any separate agreement allocating the costs
22 hereof, each Defendant hereby covenants not to sue or otherwise
23 assert any claim against any other Defendant for reimbursement of
24 any payment made pursuant to this Decree, except to enforce any
25 allocation of costs made pursuant to such separate agreement.

26 ///

27 ///

28 ///

1 XXIX. CONTRIBUTION PROTECTION

2
3 Pursuant to Sections 113(f)(2) and 122(h)(4) of CERCLA and
4 other applicable federal and state law, Defendants shall not be
5 liable to other persons or entities for contribution claims
6 regarding Covered Matters. Nothing in this Section shall
7 constitute or be construed as releasing or providing any Covenant
8 Not to Sue or Contribution Protection with respect to Covered
9 Matters to any person not a Defendant or to any Defendant which
10 has defaulted on its obligations under this Decree. The United
11 States and the State expressly reserve the right to bring any
12 appropriate action against persons and entities not signatories
13 hereto to recover response costs incurred by the United States
14 and the State.

15
16 Each Cash Defendant's right to Contribution Protection under
17 this Section shall remain in effect against all other persons
18 provided it has not defaulted on any obligation under this
19 Decree, whether or not any other Defendant has fully performed
20 its obligations under this Decree. Each Work Defendant's right
21 to Contribution Protection under this Section shall remain in
22 effect against all other persons provided Work Defendants have
23 not defaulted on any obligation under this Decree and that such
24 Work Defendant has not defaulted on its obligations arising out
25 of this Decree, whether or not any or all Cash Defendants has
26 fully performed its obligations under this Decree.

27 ///

28 ///

1 XXX. COVENANT NOT TO SUE

2
3 A. Except as provided in Paragraph C, upon the approval by
4 EPA of the final Work Completion Report and certification of
5 completion of the Work, including operations, maintenance and
6 monitoring, the United States, EPA, the State, the California
7 Hazardous Substance Account, and the Attorney General of
8 California (with respect to the authority under California
9 Government Code §§ 12600 - 12612) covenant not to sue the Work
10 Defendants with regard to the Covered Matters which are performed
11 satisfactorily by Work Defendants. "Covered Matters" shall mean
12 those conditions which the alternatives selected in the RODs
13 (attached as Appendices A and B) are designed to remedy, the Work
14 implemented under Section IX (Work to be Performed), oversight
15 costs associated with the performance of that Work and for all
16 past response costs, including interest accrued thereon, incurred
17 by the United States, the State and the California Hazardous
18 Substance Account up to June 1, 1988. Covered Matters
19 specifically do not include removals, remedial actions which will
20 be implemented pursuant to the final remedy, the gas control and
21 any future operable unit(s), or any environmental condition which
22 is identified in the RI/FS (except to the extent those removals,
23 remedial actions, or those environmental conditions are already
24 covered by Appendices A or B or the Work). The Parties also
25 agree that remedial actions for groundwater contamination, if
26 any, are not Covered Matters under this Decree. This Section is
27 not, and shall not be construed as, a Covenant Not to Sue any
28 Work Defendant that does not fulfill its obligations arising out

1 of this Decree, or any other person or entity not a Party to this
2 Decree. Under the provisions of Section IV (Binding Effect),
3 Work Defendants shall be jointly and severally responsible for
4 the performance of the Work Defendants' obligations outlined in
5 this Decree; provided however, that their rights to a Covenant
6 Not to Sue under this Decree shall not be affected by the
7 performance or nonperformance of any obligation by any Cash
8 Defendant under this Decree.

9
10 B. Except as provided in Paragraph C, upon receipt of all
11 payments required of each Cash Defendant under this Decree, the
12 United States, the State, the California Hazardous Substance
13 Account, and the Attorney General of California (with respect to
14 the authority under California Government Code §§ 12600 - 12612)
15 covenant not to sue that Cash Defendant for Covered Matters. Any
16 Cash Defendant can obtain the full benefit of this Covenant Not
17 to Sue by prepayment, at any time, of the balance of the total
18 amount due under Attachment A, Schedule 2. This Covenant Not to
19 Sue shall remain in effect with respect to any Cash Defendant
20 whether or not any other Defendant fulfills its obligations under
21 this Decree.

22
23 C. Defendants are expressly not released from, and the
24 provisions of Paragraphs A and B of this Section shall not apply
25 to, any matter which is not a Covered Matter, including the
26 following claims:

27 ///

28 ///

1 1. Any claim based on a failure of any Defendant to meet
2 its obligations under this Decree;

3
4 2. Any other claims of the United States, the State, or the
5 California Hazardous Substance Account for any other costs or
6 actions necessary at the OII Site which are not covered pursuant
7 to the terms of this Decree;

8
9 3. Claims based on the Defendants' liability arising from
10 the past, present, or future disposal of hazardous substances not
11 associated with the OII Site at other disposal sites;

12
13 4. Any liability of Work Defendants for damage to federal
14 or state property located any place that the Work is being
15 performed;

16
17 5. Claims based on criminal liability;

18
19 6. Claims based on liability for damage to natural
20 resources as defined in CERCLA;

21
22 7. Claims based on liability for future monitoring or
23 oversight expenses incurred by the United States or the State
24 except as those expenses are Covered Matters; or

25
26 8. Liability on the part of the Work Defendants for any
27 violations of federal or state law which arises from
28 implementation of the Work.

1 D. The Defendants hereby release and covenant not to sue
2 the United States, including any and all departments, agencies,
3 officers, administrators, and representatives thereof, for any
4 claim, counter-claim, or cross-claim asserted, or that could have
5 been asserted prior to the effective date of this Decree arising
6 out of or relating to the OII Site, except for any liability
7 arising under Sections 107 or 113 of CERCLA relating to the OII
8 Site for any federal entity that has not resolved its liability
9 for Covered Matters under the provisions of this Decree or its
10 equivalent. Defendants also release and covenant not to sue the
11 State, including any and all officers, administrators, and
12 representatives thereof, for any claim, counter-claim, or
13 cross-claim asserted, or that could have been asserted prior to
14 the effective date of this Decree arising out of or relating to
15 the OII Site.

16

17 E. Nothing in this Decree shall constitute or be construed
18 as a release or a covenant not to sue regarding any claim or
19 cause of action against any person, as defined in Section 101(21)
20 of CERCLA or California Health and Safety Code, § 25319, or other
21 entity, not a signatory to this Decree for any liability it may
22 have arising out of or relating to the Site.

23

24 F. The Parties to this Decree agree that while the United
25 States, EPA and the State may support the applicability of
26 Section XXIX (Contribution Protection) based upon the existence
27 of this Decree, neither the United States, nor EPA nor the State
28 shall be under any obligation to assist the Defendants in any way

1 in defending against suits for contribution brought against the
2 Defendants which allege liability for matters covered by this
3 Covenant Not to Sue by persons or entities that have not entered
4 into this settlement.

5

6 G. The Covenants Not to Sue under Paragraphs A, B and D
7 contained in this Section shall also apply to:

8

9 1. Each Defendant's directors, officers and employees as to
10 their actions in that capacity for that Defendant, and

11

12 2. Each Defendant's successors and assigns except to any
13 liability of such successor or assign which arose independently
14 of the liability of that Defendant.

15

16 XXXI. WAIVER OF CLAIM-SPLITTING DEFENSE

17

18 All Parties recognize and acknowledge that the settlement
19 embodied in this Decree is only a partial resolution of issues
20 related to the remediation of conditions at the Site. Defendants
21 hereby waive the defenses of res judicata, collateral estoppel,
22 and claim-splitting by the Plaintiffs, only with respect to the
23 Plaintiffs' rights to pursue subsequent litigation regarding
24 Defendants' responsibility for phases of Site work and costs not
25 covered by this Decree.

26 ///

27 ///

28 ///

1 XXXII. COMMUNITY RELATIONS

2
3 The Work Defendants shall cooperate with EPA and the State
4 in providing information to the public. As requested by EPA or
5 the State, the Work Defendants shall participate in the
6 preparation of all appropriate information disseminated to the
7 public and in public meeting(s) which may be held or sponsored by
8 EPA or the State to explain activities at or concerning the Site
9 relative to the Work required under the terms of this Decree. As
10 appropriate, EPA or the State may seek consultation with and
11 assistance from Work Defendants in the preparation of information
12 disseminated to the public and in public meeting(s) which may be
13 held or sponsored by EPA or the State to explain activities at or
14 concerning the Site.

15
16 XXXIII. LODGING AND PUBLIC PARTICIPATION

17
18 Pursuant to Section 122(d) of CERCLA, 42 U.S.C. § 9622(d),
19 this Decree will be lodged with the Court for thirty (30) days,
20 and the United States shall publish a Notice of Availability of
21 review to allow public comment prior to entry by the Court. The
22 United States will file with the Court a copy of any comments
23 received and the responses of the United States to such comments.

24
25 No Party shall be bound by modifications to this Decree
26 without its prior written consent, and consent to this Decree is
27 not consent to such modifications.

28 ///

1 XXXIV. STATE AND LOCAL AGENCY PARTICIPATION

2
3 A. Lead Agency

4
5 EPA is and shall be the lead agency, as defined in the NCP,
6 for the activities within the scope of this Decree.

7
8 B. Interagency Committee

9
10 The Operating Industries Interagency Committee ("IAC")
11 consists of interested state and local agencies. The IAC meets
12 on a regular basis to exchange information on agency regulatory
13 activities at the OII Site and reviews and comments on remedial
14 and response actions undertaken at the Site. The IAC has a
15 Technical Subcommittee ("IAC Technical Subcommittee") which
16 exchanges technical information and which is primarily
17 responsible for reviewing and commenting on the remedial and
18 response actions.

19
20 C. Role of Interagency Committee

21
22 The Work Defendants shall make available copies of
23 significant deliverables in this Decree, such as Plans, Designs
24 and the Operations Manual, to the members of the IAC for review.
25 EPA will provide Work Defendants with a current mailing list for
26 IAC members prior to the effective date of this Decree. After
27 the IAC Technical Subcommittee and any other interested IAC
28 members have had the opportunity to review the deliverables, they

1 shall have the opportunity to meet with EPA and the State to
2 discuss the deliverables and prepare collaborative comments.
3 These collaborative comments shall be submitted to the Work
4 Defendants as EPA comments. The Work Defendants shall respond to
5 the EPA comments as may be required by the terms of Section IX
6 (Work to be Performed) and subject to Work Defendants right under
7 Section XXIV (Dispute Resolution).

8
9 D. EPA will consult with the State before approving any
10 significant deliverables required to be submitted by the Work
11 Defendants under this Decree. EPA will also consult with the
12 State before determining whether a force majeure event beyond the
13 control of the Work Defendants has occurred, and whether the Work
14 Defendants have substantially complied with or completed the
15 terms of this Decree. EPA's failure to consult with the State
16 will not relieve the Work Defendants of any obligation to comply
17 with the requirements of this Decree. If it is not practicable
18 for EPA to consult with the State, EPA shall notify the State of
19 its approval or determination as soon as possible. The State's
20 failure to object in a timely manner to an approval,
21 determination, or other decision of EPA made under this Decree
22 shall constitute concurrence with EPA.

23

24 XXXV. CONSISTENCY WITH THE NCP

25

26 The United States, the State and the Defendants agree that
27 the Work, if performed in accordance with the requirements of
28 this Decree, is consistent with the provisions of the National

1 Oil and Hazardous Substances Pollution Contingency Plan, 40
2 C.F.R. Part 300, pursuant to Section 105 of CERCLA 42 U.S.C.
3 § 9605.
4

5 XXXVI. INDEMNIFICATION
6

7 A. The Work Defendants shall indemnify the United States
8 with respect to EPA, USACE and the U.S. Coast Guard, and the
9 State and save and hold the United States with respect to EPA,
10 USACE and the U.S. Coast Guard, and the State, and any of their
11 divisions, departments, agents and employees harmless for any and
12 all claims or causes of action arising from any injuries or
13 damages to persons or property resulting from any negligent,
14 wanton or willful acts or omissions of the Work Defendants, or
15 their successors, assigns, contractors, subcontractors, or any
16 other person acting on their behalf in carrying out any
17 activities pursuant to the terms of this Decree. This
18 indemnification does not extend to that portion of any such claim
19 or cause of action attributable to the negligent, wanton or
20 willful acts or omissions of the United States with respect to
21 EPA, USACE, or the U.S. Coast Guard, or the State or their
22 contractors, subcontractors or any other person acting on their
23 behalf in carrying out activities at the Site. The United States
24 and the State shall notify Work Defendants of any such claims or
25 actions within thirty (30) days of receiving notice that such a
26 claim or action has been filed. The Work Defendants have the
27 right to intervention under Section 113(i) of CERCLA, if
28 ///

1 applicable, and to seek intervention under the provisions of
2 F.R.Civ. P. 24 and California Code of Civil Procedure § 387.
3

4 Neither Plaintiffs nor Cash Defendants are parties to any
5 contract entered into by the Work Defendants at the Site.
6

7 B. Work Defendants agree to indemnify and hold Cash
8 Defendants and their directors, officers and employees harmless
9 from damages or claims arising as a result of negligent
10 performance of the Work, or of negligent, willful, or wanton
11 failure to perform the Work by the Work Defendants or their
12 contractors or subcontractors. This indemnity and hold harmless
13 as to Cash Defendants shall not apply to any Cash Defendant which
14 is not in compliance with the terms of this Decree. Furthermore,
15 this indemnity and hold harmless shall not include any damages or
16 claims arising as a result of any negligent, willful or wanton
17 act or omission of any Cash Defendant or its directors, officers
18 or employees, nor shall it include any damages or claims which
19 arise or result from conditions at the Site which are not the
20 result of the Work performed under this Decree by the Work
21 Defendants or their contractors or subcontractors. Without
22 limiting the foregoing, the Work Defendants' obligation as to the
23 Cash Defendants shall not apply to any claim or cause of action
24 arising prior to the effective date of this Decree or to the
25 extent of any liability attributable to any third party,
26 including EPA, the State or any Cash Defendant. Any Cash
27 Defendant shall notify Work Defendants of any such claim or
28 action within thirty (30) days of receiving notice that such a

1 claim or action has been filed. Work Defendants shall have the
2 right to join in the defense of all claims or causes of action
3 within the scope of this indemnification. Further, unless Work
4 Defendants refuse to join in the defense as herein provided, Cash
5 Defendants shall not take or fail to take any action which would
6 prejudice Work Defendants' rights, privileges, defenses, or
7 claims, and shall not settle any claim or cause of action within
8 the scope of this indemnification without the consent of the Work
9 Defendants. Nothing in this Paragraph B shall be construed to
10 affect or pertain to the indemnification of the United States or
11 State, as set forth in Paragraph A of this Section.

12
13 XXXVII. CLAIMS AGAINST THE FUND
14

15 Nothing in this Decree shall be deemed to constitute a
16 preauthorization of a CERCLA claim within the meaning of
17 Sections 111 or 112 of CERCLA or 40 C.F.R. § 300.25(d). In
18 consideration of the entry of this Decree, Defendants agree not
19 to make any claims pursuant to Section 112 or Section 106(b)(2),
20 42 U.S.C. §§ 9612, 9606(b)(2), or any other provision of law
21 directly or indirectly against the Hazardous Substance Superfund,
22 or make other claims against the United States or the State for
23 those costs expended in connection with this Decree.

24
25 XXXVIII. CONTINUING JURISDICTION
26

27 The Court specifically retains jurisdiction over both the
28 subject matter of and the Parties to this action for the duration

1 of this Decree for the purposes of issuing such further orders or
2 directions as may be necessary or appropriate to construe,
3 implement, modify, enforce or terminate the terms of this Decree
4 or for any further relief as the interest of justice may require.
5

6 XXXIX. REPRESENTATIVE AUTHORITY
7

8 Each undersigned representative of the Parties to this
9 Decree certifies that he or she is fully authorized by the Party
10 to enter into and execute the terms and conditions of this
11 Decree, and to legally bind such Party to this Decree.
12

13 XL. EFFECTIVE DATE
14

15 This Decree is effective upon the date of its entry by the
16 Court.
17

18 XLI. TERMINATION AND SATISFACTION
19

20 Upon completion of the Work to be performed pursuant to this
21 Decree, or upon occurrence of an event terminating Work
22 Defendants' obligations, as described in Paragraph C of Section
23 IX (Work to be Performed), Work Defendants shall submit to
24 Plaintiffs a written certification that the Work has been
25 completed in accordance and in full compliance, or that they have
26 otherwise satisfied their obligations in accordance and in full
27 compliance, with this Decree. Within sixty (60) days of receipt
28 of such certification, EPA shall approve or disapprove the

1 certification subject to the provisions of Paragraphs A and D of
2 Section XXXIV (State and Local Agency Participation). The
3 provisions of this Decree, including Work Defendants' obligations
4 for Covered Matters, other than Section XVII (Retention of
5 Records), shall be deemed satisfied upon the Work Defendants'
6 receipt of such written approval from EPA; provided that
7 termination of this Decree shall not alter the provisions of
8 Section XVIII (Reservation of Rights), Section XXIX (Contribution
9 Protection), Section XXX (Covenant Not to Sue) and such other
10 continuing rights and obligations of Work Defendants under this
11 Decree.

12
13 Upon full payment of all its obligations under Section VIII
14 (Payments by Cash Defendants), Section X (Escrow Account) and
15 Attachment A, each Cash Defendant shall have satisfied its
16 obligations for Covered Matters under this Decree, and this
17 Decree shall be terminated as to that Cash Defendant, provided
18 that the termination shall not alter the provisions of
19 Section XVIII (Reservation of Rights), Section XXIX (Contribution
20 Protection), Section XXX (Covenant Not to Sue) and such other
21 continuing rights and obligations of that Cash Defendant under
22 this Decree.

23 ///

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XLII. SECTION HEADINGS

The section headings set forth in this Decree and its Table of Contents are included for convenience of reference only and shall be disregarded in the construction and interpretation of any of the provisions of this Decree.


XLIII. COUNTERPARTS

This Decree may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.


SIGNED and ENTERED this 7 day of December, 1988.


UNITED STATES DISTRICT JUDGE

1 FOR PLAINTIFF UNITED STATES OF AMERICA:


2 
3 ROGER J. MARZULLA
4 Assistant Attorney General
5 Land and Natural Resources Division
6 U.S. Department of Justice

Dated: NOV 21 1988

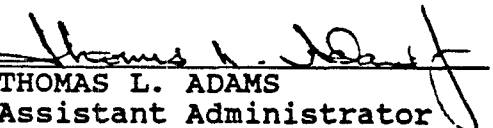
7 
8 ROBERT D. BROOK
9 Environmental Enforcement Section
10 Land and Natural Resources Division
11 P.O. Box 7611, Ben Franklin Station
12 U.S. Department of Justice
13 Washington, D.C. 20044

Dated: November 17 1988

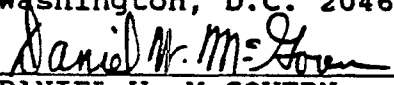
14 ROBERT C. BONNER
15 United States Attorney

16 
17 ROBERT B. BRIGGS
18 Assistant United States Attorney
19 Central District of California
20 1100 U.S. Courthouse
21 312 North Spring Street
22 Los Angeles, California 90012


Dated: December 2, 1988

23 
24 THOMAS L. ADAMS
25 Assistant Administrator
26 Office of Enforcement and Compliance Monitoring
27 U.S. EPA
28 401 M Street, S.W.
Washington, D.C. 20460

Dated: November 17, 1988

29 
30 DANIEL W. MCGOVERN
31 Regional Administrator
32 U.S. EPA Region IX
33 215 Fremont Street
34 San Francisco, California 94105

Dated: November 4, 1988

35 
36 LISA A. HAAGE
37 Assistant Regional Counsel
38 U.S. EPA Region IX
39 215 Fremont Street
40 San Francisco, California 94105

Dated: 27 October 1988

1 FOR PLAINTIFFS STATE OF CALIFORNIA AND CALIFORNIA HAZARDOUS
2 SUBSTANCE ACCOUNT:

3 Lisa Trankley Sato
4 LISA TRANKLEY SATO
5 Deputy Attorney General
6 1515 K Street, Suite 511
7 P.O. Box 944255
8 Sacramento, CA 94424-2550

9 Kenneth W. Kizer
10 KENNETH W. KIZER
11 Director, Department of Health Services
12 714 "P" Street
13 Office Building #8, Room 1253
14 Sacramento, CA 95814

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: ALUMINUM COMPANY OF AMERICA

6
7 DATED: October 13, 1988

8
9 BY:

10
11 Name: V. R. Scorsone

12
13 Signature: V. R. Scorsone

14
15 Title: Group Vice President

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Anchorlok Corp.

6
7 DATED: October 14, 1988

8
9 BY:

10
11 Name: **GERALD G. TIGHE**

12
13 Signature: *Gerald G. Tighe*

14
15 Title: **SENIOR VICE PRESIDENT**

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4 Anchorlok Corp.
5 FOR DEFENDANT: as successor to Royal Industries Inc.
6 _____

7 DATED: October 14, 1988
8 _____

9 BY:

10 Name: **GERALD G. TIGHE**
11 _____

12 Signature: _____
13 _____

14 Title: **SENIOR VICE PRESIDENT**
15 _____

The undersigned Defendant hereby consents to the foregoing
Partial Consent Decree in United States, et al. v. Chevron
Chemical Company, et al.

FOR DEFENDANT: American Can Company
(now Primerica Corporation)

DATED: October 10, 1988

BY:

Name: Raymond A. Bernabo

Signature: _____

Title: Vice President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: AMERICAN NATIONAL CAN COMPANY

6
7 DATED: October 11, 1988

8
9 BY:

10
11 Name: Leonard C. Everson

12
13 Signature: _____

14
15 Title: Senior Vice President &
16 General Counsel

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Aratex Services, Inc., doing business as
6 Red Star Industrial Service

7 DATED: October 11, 1988

8
9 BY:

10
11 Name: Edwin E. Darling

12
13 Signature: _____

14
15 Title: Vice President, Technical Services
16 Aratex Services, Inc.

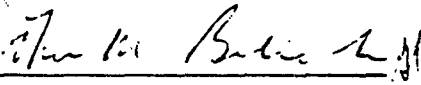
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.
4

5 FOR DEFENDANT: Armco Inc.
6

7 DATED: October 13, 1988
8

9 BY:

10
11 Name: John M. Bilich

12
13 Signature: 
14

15 Title: Corporate Vice President
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PARTIAL CONSENT DECREE

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Atlantic Richfield Co.

6

7 DATED: October 6, 1988

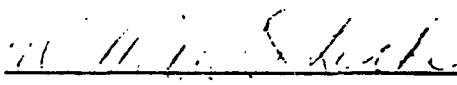
8

9 BY:

10

11 Name: William D. Leake

12

13 Signature: 

14

15 Title: Vice President, Corporate
16 Environmental Protection

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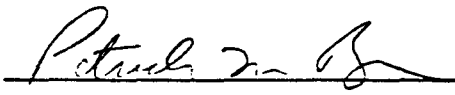
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Beatrice/Hunt-Wesson, Inc.

6
7 DATED: October 12, 1988

8
9 BY:

10
11 Name: Patrick M. Ryan

12
13 Signature:  *AKS*

14
15 Title: Vice President

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PARTIAL CONSENT DECREE

The undersigned Defendant hereby consents to the foregoing Partial Consent Decree in United States, et al. v. Chevron Chemical Company, et al.

FOR DEFENDANT: BJ-Titan Services Company,
successor in interest to
B.J. Services Equipment Company

DATED: October 7, 1988

BY:

Name: J. W. Stewart

Signature:

Title: President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Borden, Inc.

6
7 DATED: September 27, 1988

8
9 BY:

10
11 Name: Joseph M. Saggese

12
13 Signature:  *WTH*

14
15 Title: Senior Group Vice President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: CalMat Co.,
6 a Delaware corporation
7 formerly known as
8 Conrock Co.

9 DATED: October 13, 1988

10 BY:

11 Name: Scott J Wilcott

12
13 Signature: 

14 Senior Vice President
15 Title: Legal Counsel & Secretary

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Champion International Corporation

6
7 DATED: October 13, 1988

8
9 BY:

10
11 Name: 

12
13 Signature: James W. Carraway

14
15 Title: Director, Environmental Projects

The undersigned Defendant hereby consents to the foregoing
Partial Consent Decree in United States, et al. v. Chevron
Chemical Company, et al.

FOR DEFENDANT: Coca-Cola Bottling Company of Los Angeles

DATED:

10/6/88

BY:

Name: Thomas D. Sherman

Signature:

Title: Vice President, General Counsel
and Secretary

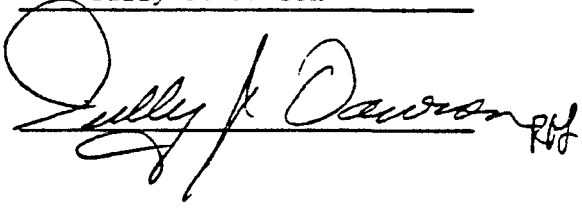
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: The Coca-Cola Company

6
7 DATED: September 29, 1988

8
9 BY: its Coca-Cola USA Division

10
11 Name: Tully J. Dawson

12
13 Signature:  RJD

14
15 Title: Vice President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: DAVIDSON D.W.P.

6

7 DATED: October 10, 1988

8

9 BY:

10

11 Name: Richard T. Manners

12

13 Signature: *Richard T. Manners*

14

15 Title: Secretary and Treasurer

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: DEPARTMENT OF WATER AND POWER
6 OF THE CITY OF LOS ANGELES

7 DATED: October 13, 1988

8
9 BY:

10
11 Name: Norman E. Nichols

12
13 Signature: 

14
15 Title: Assistant General Manager - Power
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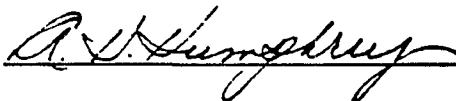
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Edgington Oil Company

6
7 DATED: October 12, 1988

8
9 BY:

10
11 Name: Arch H. Humphrey

12
13 Signature: 

14
15 Title: President

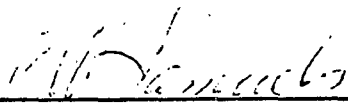
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Emerson & Cuming Inc.

6
7 DATED: October 7, 1988

8
9 BY:

10
11 Name: Robert W. Samuels

12
13 Signature: 

14 President - Grace Specialty Chemicals Co.
15 Title: Exec. Vice President - W. R. Grace & Co.

The undersigned Defendant hereby consents to the foregoing Partial Consent Decree in United States, et al. v. Chevron Chemical Company, et al.

FOR DEFENDANT: EXXON CORPORATION

DATED: OCTOBER 12, 1988

BY:

Name: K. T. KOONCE

Signature:

Title: VICE PRESIDENT

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: THE FIRESTONE TIRE & RUBBER COMPANY

6

7 DATED: OCTOBER 10, 1988

8

9 BY:

10

11 Name: ALAN G. ALTENAU

12

13 Signature: Alan G. Altenu

14

15 Title: DIRECTOR OF TECHNOLOGY

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Flint Ink Corporation

6
7 DATED: October 6, 1988

8
9 BY:

10
11 Name: John H. Denler, Jr.

12
13 Signature: 

14
15 Title: Assistant Treasurer

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: PETRO-LEWIS CORPORATION
6 Now Known As FPCO Oil & Gas Co.

7 DATED: October 10, 1988

8
9 BY:

10
11 Name: Charles E. Holmes

12
13 Signature: 

14
15 Title: Vice President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Franciscan Ceramics, Inc.

6

7 DATED: October 12, 1988


8

9 BY:

10

11 Name: James R. Colleran

12

13 Signature: 

14

15 Title: President

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: General Latex and Chemical Corporation

6
7 DATED: October 14, 1988

8
9 BY:

10
11 Name: William H. Jefferson

12
13 Signature:

14
15 Title: President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: HYDRIL COMPANY

6
7 DATED: October 11, 1988

8
9 BY:

10
11 Name: JOHN F. HALL

12
13 Signature: 

14
15 Title: Vice President and Secretary

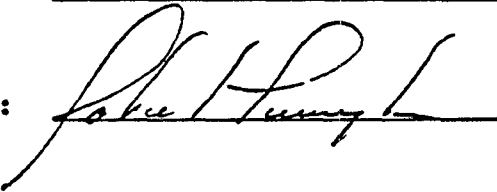
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: International Extrusion Corporation

6
7 DATED: October 5, 1988

8
9 BY:

10
11 Name: John P. Cunningham

12
13 Signature: 

14
15 Title: President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: INTERNATIONAL PAPER COMPANY

6
7 DATED: October 12, 1988

8
9 BY:

10
11 Name: DAVID T. JAECH

12
13 Signature: 

14
15 Title: Gen Mgrs - CONTAMIN DIVISION - WEST.

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Interpace Corporation

6

7 DATED: October 13, 1988

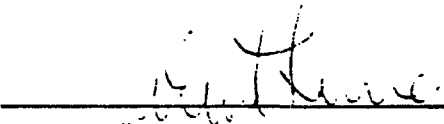
8

9 BY: Madison Management Group, Inc.
10 (as successor in interest to Interpace Corporation)

11

12 Name: Robert Lurie

13

14 Signature: 

15

16 Title: President

17

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

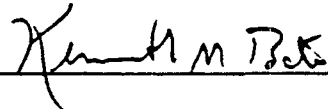
4
5 FOR DEFENDANT: Kiewit Continental Inc.

6
7 DATED: October 10, 1988

8
9 BY:

10
11 Name: Kenneth M. Bate

12
13 Signature:

 (PE)

14
15 Title: Vice President and Treasurer

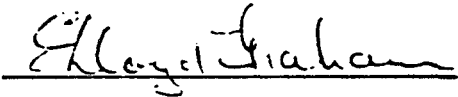
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: LOCKHEED AERONAUTICAL SYSTEMS COMPANY
6 a division of LOCKHEED CORPORATION

7 DATED: October 13, 1988

8
9 BY:

10
11 Name: E. Lloyd Graham

12
13 Signature: 

14
15 Title: Executive Vice President and
16 General Manager-Headquarters Operations
17
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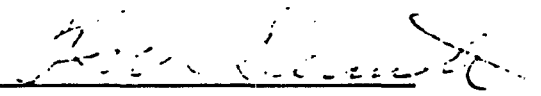
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Longview Fibre Company

6
7 DATED: October 14, 1988

8
9 BY:

10
11 Name: R. G. McDermott

12
13 Signature: 

14
15 Title: Senior Vice President-Finance

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Luxfer USA Limited

6
7 DATED: September 22, 1988

8
9 BY:

10
11 Name: Don D. Borden

12
13 Signature:

14
15 Title: President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: MAYTAG CORPORATION*

6
7 DATED: October 11, 1988

8
9 BY:

10
11 Name: D. C. Byers

12
13 Signature: 

14
15 Title: Secretary and General Counsel

16
17 * Gaffers and Sattler, Inc. was merged into Magic Chef, Inc.
18 on December 29, 1978. On January 4, 1988, Magic Chef, Inc.
19 was merged into Maytag Corporation.
20
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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.
4

5 FOR DEFENDANT: McAULEY LCX CORPORATION
6

7 DATED: OCTOBER 12, 1988
8

9 BY:
10

11 Name: CHARLES S. McAULEY
12

13 Signature: 
14

15 Title: CHAIRMAN & PRESIDENT
16
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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Mitchell Energy Corporation

6

7 DATED: October 13, 1988

8

9 BY:

10

11 Name: Joe A. Wanamaker

12

13 Signature: 

14

15 Title: Vice President & General Manager

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: OLANS-ILLINOIS, INC.

6

7 DATED: October 11, 1958

8

9 BY: Michael E. McConnell

10

11 Name: Michael E. McConnell

12

13 Signature: Michael E. McConnell

14

15 Title: _____

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Quantum Chemical Corporation, Emery Division

6
7 DATED: October 14, 1988

8
9 BY:

10
11 Name: Robert T. Betz

12
13 Signature: 

14 Vice President, Quantum Chemical Corporation

15 Title: President, Emery Division

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Reichhold Chemicals, Inc.

6

7 DATED: October 13, 1988

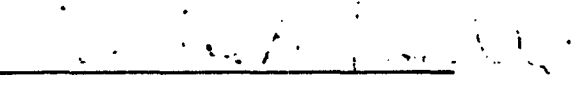
8

9 BY:

10

11 Name: Charles A. Lorelli

12

13 Signature: 

14

15 Title: Vice President, General Counsel
 and Secretary

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: REISNER METALS, INC.

6
7 DATED: October 12, 1988

8
9 BY:

10
11 Name: Jeremy F. Swett

12
13 Signature: 

14
15 Title: Corporate Counsel

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: 7UP/RC BOTTLING COMPANIES OF SOUTHERN CALIFORNIA

6
7 DATED: 10/11/88

8
9 BY:

10
11 Name: JOHN ORLANDO

12
13 Signature: 

14
15 Title: EXECUTIVE VICE PRESIDENT
16 CHIEF OPERATING OFFICER

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Soule'-Arnon Liquidating Agency

6

7 DATED: October 13, 1988

8

9 BY:

10

11 Name: Keith Howard

12

13 Signature: _____

14

15 Title: Attorney

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: STROM CONTAINER COMPANY

6
7 DATED: NOVEMBER 16, 1988

8
9 BY:

10
11 Name: ROBERT E. KUEHN

12
13 Signature: [Signature]

14
15 Title: Vice President, General Counsel

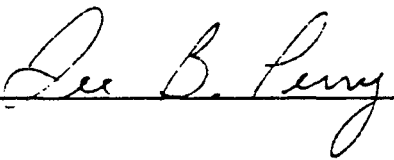
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: SupraCote, Inc.

6
7 DATED: September 27, 1988

8
9 BY:

10
11 Name: Lee B. Perry

12
13 Signature: 

14
15 Title: Chief Financial Officer

1 The undersigned Defendant hereby consents to the
2 foregoing Partial Consent Decree in United States, et al. v.
3 Chevron Chemical Company, et al.

4
5 FOR DEFENDANT: Los Angeles Times/Times Mirror Press

6 DATED: October 13, 1988

7
8
9 BY: The Times Mirror Company
Los Angeles Times Division

Times Mirror Press

10
11 Name: William A. Niese

William A. Niese

12 Signature: William A. Niese

William A. Niese

13
14 Title: Vice President/Los
Angeles Times
15 Assistant Secretary/
The Times Mirror
16 Company

Vice President and
Secretary

17
18
19
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23
24 PARTIAL CONSENT DECREE

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Tree Island Industries Ltd.

6
7 DATED: October 13, 1988

8
9 BY:

10
11 Name: 

12
13 Signature: A. J. SACKS

14
15 Title: PRESIDENT

16
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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: TRW Inc.

6
7 DATED: October 6, 1988

8
9 BY:

10
11 Name: *James C. Bays*

12
13 Signature: James C. Bays

14
15 Title: Assistant Secretary

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.
4

5 FOR DEFENDANT: UNION CARBIDE CORPORATION
6

7 DATED: OCTOBER 10, 1988
8

9 BY:
10

11 Name: R.L. Broemmelsiek
12

13 Signature: *R.L. Broemmelsiek*
14

15 Title: *Vice President Industrial Sales*
16
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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.
4

5 FOR DEFENDANT: Union Pacific Resources Company¹
6

7 DATED: October 13, 1988
8

9 BY:
10

11 Name: Robert S. Jackson *RSJ*
12

13 Signature: Robert S. Jackson
14

15 Title: Vice President - Finance
16

17 ¹for itself in its sole capacity; and as Working Interest Owner
18 in Fault Blocks I, II, III, and IV of the Wilmington Oil Field,
19 Los Angeles County, California; and as Unit Operator of Unit
20 Segment II of Fault Blocks II and III of the Wilmington Oil
21 Field, Los Angeles County, California, on behalf of Working
22 Interest Owners in Unit Segment II of Fault Blocks II and III.
23
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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: United Air Lines, Inc.

6
7 DATED: October 6, 1988

8
9 BY:

10
11 Name:

Edward H. Hoenicke
Edward H. Hoenicke

12
13 Signature: _____

14
15 Title: Senior V. P. and General Counsel

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: UNITED PARCEL SERVICE OF AMERICA, INC.

6
7 DATED: OCTOBER /3, 1988

8
9 BY:

10
11 Name: JOSEPH R. MODEROW

12
13 Signature: X *Joseph R. Moderow*

14
15 Title: Senior Vice President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: United States Brass Corporation (Eastman Central)

6
7 DATED: September 21, 1988

8
9 BY:

10
11 Name: Thomas L. Aldrich

12
13 Signature: Thomas L. Aldrich

14
15 Title: Assistant General Counsel and Assistant Secretary

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: VAN WATERS & ROGERS

6
7 DATED: October 10, 1988

8
9 BY: Van Waters & Rogers Inc., formerly
10 Van Waters & Rogers, a division of
 Univar Corporation

11 Name: Barry C. Maulding

12
13 Signature: *Barry C. Maulding*

14
15 Title: Corporate Secretary

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: ALLIED-SIGNAL INC.

6
7 DATED: October 3, 1988

8
9 BY:

10
11 Name:

John Beale
John Beale

12
13 Signature:

John Beale

14
15 Title:

Director of Health,
Safety & Environmental


1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: American Airlines, Inc.

6
7 DATED: September 15, 1988

8
9 BY:

10
11 Name: Mark Johnson

12
13 Signature: 

14
15 Title: Attorney

16

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The undersigned Defendant hereby consents to the foregoing Partial Consent Decree in United States, et al. v. Chevron Chemical Company, et al.

FOR DEFENDANT: BETHLEHEM STEEL CORPORATION

DATED: SEPTEMBER 12, 1988

BY:

Name: DAVID M. ANDERSON

Signature: _____

Title: GENERAL MANAGER - ENVIRONMENTAL AFFAIRS

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Betz Laboratories, Inc.

6
7 DATED: October 11, 1988

8
9 BY: John F. McCaughan
10 Chairman and President

11 Name: John F. McCaughan

12
13 Signature: 

14
15 Title: Chairman and President

16
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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Borg-Warner Corporation

6
7 DATED: October 3, 1988

8
9 BY:

10 Neal F. Farrell
11 Name:

12 *Neal F. Farrell*
13 Signature:

14 Vice President & General Counsel
15 Title:

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT:

Calgon Vestal Laboratories
CALGON VESTAL LABORATORIES

6
7 DATED:

September 8, 1988

8
9 BY:

10
11 Name: Walter R. Maupay, Jr.

12
13 Signature: *Walter R. Maupay, Jr.*

14
15 Title: President

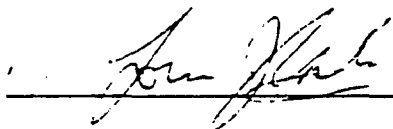
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: CARNATION COMPANY

6
7 DATED: 9/26/88

8
9 BY:

10
11 Name: Louis J. Carlo

12
13 Signature: 

14 Vice President, and President
15 and General Manager of the
16 Title: Carnation Dairies Division


1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.
4

5 FOR DEFENDANT: Chevron Chemical Company
6

7 DATED: Sept 26, 1988
8

9 BY:
10

11 Name: J. R. Sanders
12

13 Signature: 
14

15 Title: Vice President
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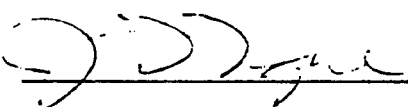
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: CHEVRON PIPE LINE CO.

6
7 DATED: SEPTEMBER 23, 1988

8
9 BY:

10
11 Name: J. T. TIGHE

12
13 Signature: 

14
15 Title: VICE PRESIDENT - OPERATIONS

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: CHEVRON U.S.A. INC.

6

7 DATED: September 28, 1988

8

9 BY:

10

11 Name: Patrick S. Hobin

12

13 Signature: Patrick S. Hobin

14

15 Title: Vice President

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Conoco Inc.

6
7 DATED: September 26, 1988

8
9 BY:

10
11 Name: I. F. Wagner

12
13 Signature: *I. F. Wagner* JRE

14
15 Title: Vice President & General Manager
16 North American Refining

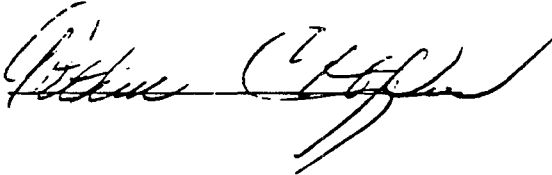
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Cooper Drum Company

6
7 DATED: September 30, 1988

8
9 BY:

10
11 Name: Arthur Cooper

12
13 Signature: 

14
15 Title: President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4 CROWLEY MARITIME CORPORATION ON BEHALF
5 FOR DEFENDANT: OF ITS WHOLLY OWNED SUBSIDIARIES CROWLEY
6 TOWING & TRANSPORTATION CO. AND CROWLEY
7 ENVIRONMENTAL SERVICES CORPORATION

8
9 DATED: October 11, 1988

10
11 BY:

12 Name: Leo L. Collar

13 Signature: 

14
15 Title: President & C.O.O.

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Cherical Company, et al.

4
5 FOR DEFENDANT: DEFT. INC.

6
7 DATED: SEPTEMBER 20, 1988

8
9 BY:

10
11 Name: [Handwritten Signature]

12
13 Signature: [Handwritten Signature]

14
15 Title: [Handwritten Title]

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Delta Air Lines, Inc.

6
7 DATED: September 30, 1988

8
9 BY:

10
11 Name: D. P. Hettermann

12
13 Signature: 

14
15 Title: Senior Vice President-
16 Technical Operations

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Douglas Oil Company

6
7 DATED: 9/28/88

8
9 BY:

10
11 Name: R. B. Merchant

12
13 Signature: 

14
15 Title: R. B. Merchant, President
16 Douglas Oil Company

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: DUNN-EDWARDS CORPORATION

6
7 DATED: October 14, 1988

8
9 BY:

10
11 Name: Jack J. Wood

12
13 Signature: 

14
15 Title: President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: The Flying Tiger Line Inc.

6

7 DATED: September 20, 1988

8

9 BY:

10

11 Name: Julie I. Sackman

12

13 Signature: *Julie I. Sackman*

14

15 Title: Assistant Secretary

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: GATX TERMINALS CORPORATION

6
7 DATED: 14 SEPTEMBER 1988

8
9 BY:

10
11 Name: DAVID E. WRIGHT

12
13 Signature: 

14
15 Title: VICE PRESIDENT, WESTERN REGION

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.


4 General Felt Industries, Inc.,
 a division of Knoll International
5 Holdings, Inc.

6 FOR DEFENDANT: _____

7 DATED: September 14, 1988

8
9 BY:

10
11 Name: Philip N. Smith, Jr.

12
13 Signature: 

14
15 Title: Vice President, General Counsel,
16 Knoll International Holdings, Inc.

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: ^{B7} GENERAL MOTORS CORPORATION
Leonard F. Charla
6 LEONARD F CHARLA
GENERAL MOTORS CORPORATION

7 DATED: 9/7/88

8
9 BY:

10
11 Name: LEONARD F CHARLA

12
13 Signature: Leonard F Charla

14
15 Title: ATTORNEY

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Georgia-Pacific Corporation

6
7 DATED: 09/12/88

8
9 BY:

10
11 Name: Richard A. Horder

12
13 Signature: 

14
15 Title: Associate General Counsel

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: HUGHES AIRCRAFT COMPANY

6

7 DATED: 9-30-88

8

9 BY:

10

11 Name: John R. Albin

12

13 Signature: *J. R. Albin*

14

15 Title: Vice President, Product Operations

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Ingersoll-Rand Company

6

7 DATED: October 10, 1988

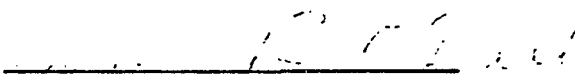
8

9 BY:

10

11 Name: James R. O'Dell

12

13 Signature: 

14

15 Title: Director,
16 Manufacturing Technology

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Insilco Corporation
6 dba Sinclair Paint Company

7 DATED: September 22, 1988

8
9 BY:

10
11 Name: Peter F. Burum

12
13 Signature: Peter F. Burum

14
15 Title: Assistant Secretary

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States v. Chevron Chemical
3 Company, et al.

4
5 FOR DEFENDANT: Jaybee MFG

6
7 DATED: 10-12-88

8
9 BY:

10
11 Name: HENRY Borenstein

12
13 Signature: H. B.

14
15 Title: Pres

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: KENOSHA AUTO TRANSPORT CORPORATION

6

7 DATED: October 11, 1988


8

9 BY:

10

11 Name: Dennis A. Troha

12

13 Signature: 

14

15 Title: President

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: LEVER BROTHERS COMPANY, INC.

6

7 DATED: SEPTEMBER 29, 1988

8

9 BY:

10

11 Name: Walter M. Volpi

12

13 Signature: Walter M. Volpi

14

15 Title: Vice President

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Liberty Vegetable Oil Company

6

7 DATED: October 10, 1988

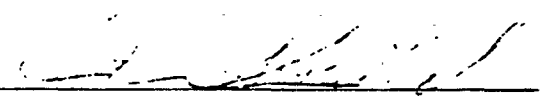
8

9 BY:

10

11 Name: Irwin S. Field

12

13 Signature: 

14

15 Title: President - CEO

16

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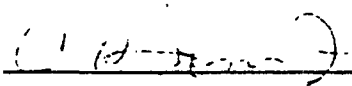
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: LONG BEACH OIL DEVELOPMENT COMPANY*

6
7 DATED: October 13, 1988

8
9 BY:

10
11 Name: C.H. Jones, Jr.

12
13 Signature: 

14
15 Title: President

16
17 * individually and as representative of the following, but
18 only to the extent of their interests in oil field properties
19 operated by Long Beach Oil Development Company: the Contractor
20 under the Drilling and Operating Contract dated March 21,
21 1964 (including, without limitation, Phillips Petroleum
22 Company, Chevron U.S.A., Inc., C M Oil Company, and American
23 Energy Operations, Inc.), the Unit Operators, and the Working
24 Interest Owners, of or for Segment I of Fault Block II
25 and III Units, Fault Block IV and V (Ranger Zone) Units
26 and nonunitized area covered by said Drilling and Operating
27 Contract in the Wilmington Oil Field, Long Beach, California.

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4 Long Beach Unit, Wilmington Oil Field, California
5 FOR DEFENDANT: (City of Long Beach, Unit Operator-THUMS Long Beach
 Company, Agent for Field Contractor)

6
7 DATED: October 13, 1988

8
9 BY: THUMS Long Beach Company, as Agent for Field Contractor
10 on Behalf of Long Beach Unit, Wilmington Field, California

11 Name: T. M. Klaric

12
13 Signature: *T.M. Klaric*

14
15 Title: President, THUMS Long Beach Company

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Major Paint Company

6
7 DATED: September 14, 1988

8
9 BY:

10
11 Name: Robert M. Abrams

12
13 Signature: 

14
15 Title: President

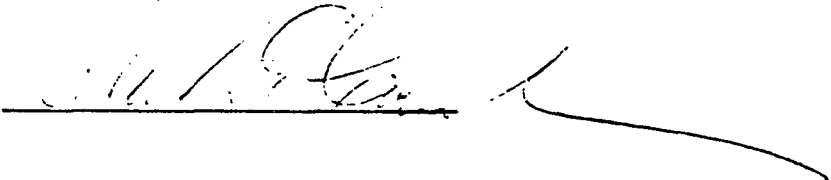
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4 Martin Marietta Corporation
5 On behalf of Defendants
6 FOR DEFENDANT: Martin Marietta Carbon, Inc., and
 Commonwealth Aluminum Corporation

7 DATED: 14 October 1988

8
9 BY:

10
11 Name: Charles E. Carnahan

12
13 Signature: 

14
15 Title: Vice President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: MAX FACTOR & CO.

6
7 DATED: SEPTEMBER 28, 1986

8
9 BY:

10
11 Name: ALLAN H. KURTZMAN

12
13 Signature: 

14
15 Title: PLASIDAT

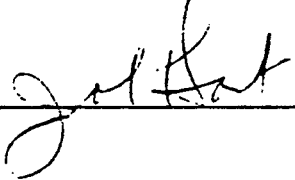
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: McDonnell Douglas Corporation

6
7 DATED: September 26, 1988

8
9 BY:

10
11 Name: John T. Sant

12
13 Signature: 

14
15 Title: Senior Vice-President
 ~~General Counsel~~

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: MENASCO, INC.

6
7 DATED: SEPTEMBER 21, 1988

8
9 BY:

10
11 Name: PAUL R. KUHN

12
13 Signature: 

14
15 Title: VICE PRESIDENT & GENERAL MANAGER

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

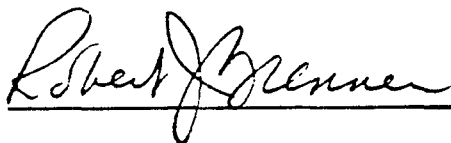
4
5 FOR DEFENDANT: Mobil Oil Corporation

6
7 DATED: September 20, 1988

8
9 BY:

10
11 Name: Robert J. Brenner

12
13 Signature:



14
15 Title: Superfund Response Manager

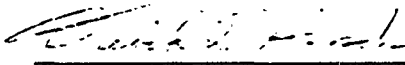
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: NI INDUSTRIES, INC.

6
7 DATED: September 14, 1988

8
9 BY:

10
11 Name: David L. Hirsch

12
13 Signature: 

14
15 Title: Vice President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: NL Industries, Inc., sued herein
6 as NL Metals

7 DATED: 10/12/88

8
9 BY:

10
11 Name: Carol L. Smith

12
13 Signature: Carol L. Smith

14
15 Title: Associate General Counsel

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Occidental Petroleum Corporation

6

7 DATED: September 9, 1988

8

9 BY:

10

11 Name: J. Jeffrey Zimmerman

12

13 Signature: J. Jeffrey Zimmerman

14

15 Title: Senior Counsel, Environment Health & Safety

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: PPG INDUSTRIES, INC.

6

7 DATED: September 30, 1988

8

9 BY:

10

11 Name: Joseph M. Karas

12

13 Signature: 

14

15 Title: Attorney

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: PARKER-HANNIFIN CORPORATION

6

7 DATED: SEPTEMBER 12, 1988

8

9 BY:

10

11 Name: JOSEPH D. WHITEMAN

12

13 Signature: 

14

15 Title: Vice President, General Counsel & Secretary

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The undersigned Defendant hereby consents to the foregoing Partial Consent Decree in United States, et al. v. Chevron Chemical Company, et al.

FOR DEFENDANT: The Procter & Gamble Manufacturing Company

DATED: October 3, 1988

BY:

Name: J. W. Nethercott

Signature:

Title: Vice President

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: REYNOLDS METALS COMPANY

6

7 DATED: October 7, 1988

8

9 BY:

10

11 Name: Rodney E. Hanneman

12

13 Signature: _____

14

15 Title: Vice President and Chief
16 Technical Officer

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: _____

6
7 DATED: _____

8
9 BY: _____

10
11 Name: _____

12
13 Signature: _____

14
15 Title: _____

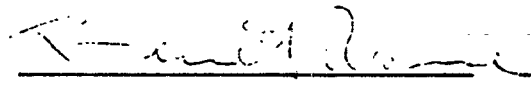
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Safeway Stores, Incorporated

6
7 DATED: September 22, 1988

8
9 BY:

10
11 Name: Bernat Rosner

12
13 Signature: 

14
15 Title: Senior Vice President - General Counsel

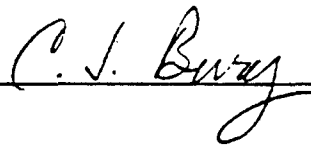
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Santa Fe Energy Company

6
7 DATED: October 10, 1988

8
9 BY:

10
11 Name: C. J. Berry

12
13 Signature: 

14
15 Title: Senior Vice-president

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Shell Oil Company

6
7 DATED: September 27, 1988

8
9 BY:

10
11 Name: Ray Lopez

12
13 Signature: 

14 Vice President
15 Title: Manufacturing & Technical

The undersigned Defendant hereby consents to the foregoing Partial Consent Decree in United States, et al. v. Chevron Chemical Company, et al.

FOR DEFENDANT: Shirley M. - 115

DATED: _____

BY: John J. Sullivan

Name: _____

Signature: _____

Title: _____


1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Southern California Edison

6
7 DATED: 10/13/88

8
9 BY:

10
11 Name: Glenn J. Bjorklund

12
13 Signature: 

14
15 Title: Vice President

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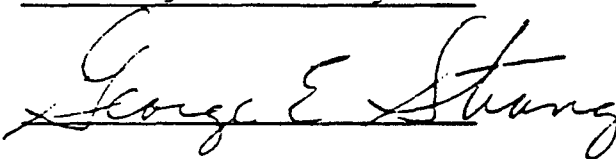
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Southern California Gas Company

6
7 DATED: September 14, 1988

8
9 BY:

10
11 Name: George E. Strang

12
13 Signature: 

14
15 Vice President
16 Title: Engineering and Research

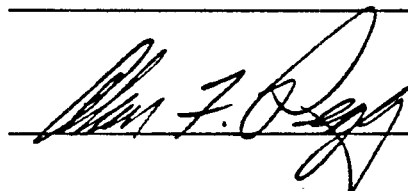
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.
4

5 FOR DEFENDANT: SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

6
7 DATED: October 14, 1988

8
9 BY:

10
11 Name: ALAN F. PEGG

12
13 Signature: 

14
15 Title: General Manager

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Southern Pacific Transportation Company

6

7 DATED: September 19, 1988

8

9 BY:

10

11 Name: D. K. McNear

12

13 Signature: *D. K. McNear*

14

15 Title: Chairman, President and
Chief Executive Officer

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The undersigned Defendant hereby consents to the foregoing Partial Consent Decree in United States, et al. v. Chevron Chemical Company, et al.

FOR DEFENDANT: SOUTHWESTERN ENGINEERING COMPANY

DATED: October 11, 1988

BY:

Name: L. E. ~~Harma~~

Signature:

Title: ~~Secretary~~

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: Sparkletts Drinking Water Corporation

6

7 DATED: September 19, 1988

8

9 BY:

10

11 Name: Douglas E. Nelson

12

13 Signature: *Douglas E. Nelson*

14

15 Title: President

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Superior Industries International, Inc.

6
7 DATED: September 20, 1988

8
9 BY:

10
11 Name: R. Jeffrey Ornstein

12
13 Signature: 

14
15 Title: VP Finance & Treasurer

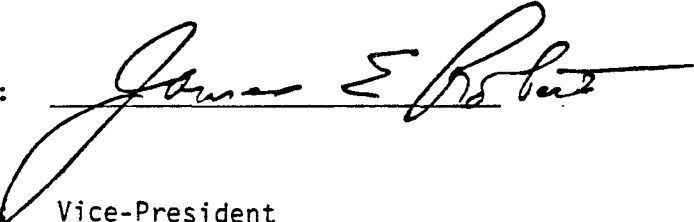
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.
4

5 FOR DEFENDANT: Sun Exploration & Production Company
6

7 DATED: October 12, 1988
8

9 BY:
10

11 Name: James E. Roberts
12

13 Signature: 
14

15 Title Vice-President
16

17 This acceptance and consent shall only be effective and binding on Sun
18 Exploration and Production Company provided that each of the following additional parties also accepts and consents to this Decree:

19 Chevron Chemical Company
20 Chevron USA, Inc.
21 Texaco, Inc.
22 McDonnell Douglas Corporation
23 UNOCAL Corporation
24 NI Industries
25 Occidental Petroleum Corporation
26 Mobil Oil Corporation
27 Southern California Gas Company
28 Shell Oil Company
Santa Fe Energy Company

Conoco, Inc., a wholly owned
subsidiary of Du Pont Energy
Company
Douglas Oil Company of California
General Motors Corporation
Long Beach Oil Development Company
Southern California Rapid Transit
District

Ninety-four and one half percent (94.5%) of the OII PRP Steering Committee shall sign this Decree.

Furthermore, the letter dated September 22, 1988 accompanying this signature page must be forwarded to the U.S. Environmental Protection Agency as part of Sun's acceptance.

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4

5 FOR DEFENDANT: _____

6

7 DATED: _____

8

9 BY: _____

10

11 Name: _____

12

13 Signature: _____

14

15 Title: _____

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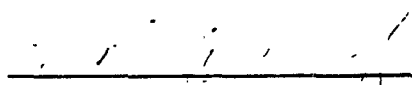
1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Transportation Leasing Company

6
7 DATED: September 19, 1988

8
9 BY:

10
11 Name: Robert E. Wilmoth

12
13 Signature: 

14
15 Title: Associate General Counsel

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: USG Corporation (Hollytex Carpet Mills)

6
7 DATED: October 13, 1988

8
9 BY:

10
11 Name: Christopher J. McElroy

12
13 Signature: *Christopher J. McElroy*

14
15 Title: Senior Corporate Counsel

16

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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.
4

5 FOR DEFENDANT: UNION OIL COMPANY OF CALIFORNIA
6

7 DATED: 14 October 1988
8

9 BY:
10

11 Name: Richard J. Stegemeier
12

13 Signature: Richard J. Stegemeier
14

15 Title: President & Chief Executive Officer
16
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1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: THE UNIROYAL GOODRICH TIRE COMPANY

6
7 DATED: 9/23/88

8
9 BY:

10
11 Name: Albin E. Uille

12
13 Signature: Albin E. Uille

14
15 Title: Vice President & General Counsel

The undersigned Defendant hereby consents to the foregoing Partial Consent Decree in United States, et al. v. Chevron Chemical Company, et al.

FOR DEFENDANT: Welch's Overall Cleaning Co., Inc. Identified as Welch's Industrial Uniform on EPA list.

DATED: September 12, 1988

BY:

Name: B. P. Berry

Signature:

Title: Secretary

1 The undersigned Defendant hereby consents to the foregoing
2 Partial Consent Decree in United States, et al. v. Chevron
3 Chemical Company, et al.

4
5 FOR DEFENDANT: Willamette Industries, Inc.

6
7 DATED: September 20, 1988

8
9 BY:

10
11 Name: Steven R. Rogel

12
13 Signature: Steven R. Rogel

14
15 Title: Executive Vice President

16

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The undersigned Defendant hereby consents to the foregoing
Partial Consent Decree in United States, et al. v. Chevron
Chemical Company, et al.

FOR DEFENDANT: XEROX CORPORATION

DATED: September 28, 1988

BY:

Name: William F. Glavin

Signature: *William F. Glavin*

Title: Vice Chairman

ATTACHMENT A

SCHEDULE 1

NAME OF COMPANY	EPA PAYMENT	STATE PAYMENT
Aluminum Company of America	\$ 699,200	\$ 6,080
American Can/Primerica Corporation	95,087	827
American National Can	5,715,863	49,703
Anchorlok Corp. for Anchorlok	292,100	2,540
Lear Siegler Corp. and Royal Industries, Inc.		
Aratex Services, Inc., for Red Star Industrial Service	146,050	1,270
Armco Inc.	109,250	950
Beatrice/Hunt-Wesson, Inc.	196,650	1,710
BJ-Titan Services Company, for B.J. Services Equipment Company	81,650	710
Borden, Inc.	94,300	820
CalMat Co. for Conrock Co.	100,050	870
Champion International Corporation for St. Regis	90,850	790
Coca-Cola Bottling Company of Los Angeles	92,000	800
The Coca-Cola Company	14,950	130
Davidson P.W.P.	96,600	840
Department of Water and Power of the City of Los Angeles	437,000	3,800
Edgington Oil	289,800	2,520
Emerson & Cuming Inc.	177,100	1,540

1	The Firestone Tire & Rubber Company	104,650	910
2	Flint Ink Corporation	197,800	1,720
3	FPCO Oil & Gas Co. for Petro-Lewis	98,900	860
4	Corporation		
5	Franciscan Ceramics, Inc.	184,000	1,600
6	General Latex and Chemical	110,400	960
7	Corporation		
8	Hydril Company	88,550	770
9	International Extrusion Corporation	85,100	740
10	International Paper Company	158,700	1,380
11	Interpace Corporation	745,200	6,480
12	Kiewit Continental Inc. for	2,251,700	19,580
13	Continental Can		
14	Lockheed Aeronautical Systems	815,350	7,090
15	Company a division of		
16	Lockheed Corporation		
17	Longview Fibre Company	80,500	700
18	Luxfer USA Limited	119,600	1,040
19	Maytag Corporation for	141,450	1,230
20	Gaffers & Sattler		
21	McAuley LCX Corporation	126,500	1,100
22	Mitchell Energy Corporation	317,400	2,760
23	Owens-Illinois, Inc.	90,850	790
24	Quantum Chemical Corporation,	400,200	3,480
25	Emery Division		
26	Reichhold Chemicals, Inc.	261,050	2,270
27	Reisner Metals, Inc.	108,100	940
28	///		

1	7Up/RC Bottling Companies of	86,250	750
2	Southern California		
3	Soule'-Arnon Liquidating Agency	1,518,000	13,200
4	Stroh Container Company for	320,850	2,790
5	Schlitz Brewing Company		
6	SupraCote, Inc.	98,900	860
7	The Times Mirror Company for	171,350	1,490
8	Los Angeles Times and Times		
9	Mirror Press		
10	Tree Island Industries Ltd.	113,850	990
11	TRW Inc.	209,300	1,820
12	Union Carbide Corporation	34,500	300
13	United Air Lines, Inc.	125,350	1,090
14	United Parcel Service of	101,200	880
15	America, Inc.		
16	United States Brass Corporation	323,150	2,810
17	for Eastman Central		
18	Van Waters & Rogers	96,600	840

19

20 All checks should reference the OII Site, and be addressed to:

21

22 For EPA:

For the State:

23 The "Cash" Escrow Account

California Department of

24

Health Services.

25

Toxics Substances Control

26

Division

27

P.O. Box 942732

28

Sacramento, CA 94234-7320

1 These funds shall be paid out and administered according to the
2 provisions of Section IX (Work to be Performed), Section X
3 (Escrow Account), Section XIX (Reimbursement of Future Response
4 and Oversight Costs) and Section XX (Reimbursement of Past
5 Costs).

6 A copy of all transmittal letters and a copy of each check
7 submitted under Schedules 1 and 2 of this Attachment shall be
8 sent to the EPA, the State, and the Work Defendants' Project
9 Coordinators.

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1 SCHEDULE 2

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	Union Pacific Resources Co. for Champlin Petroleum Co.	Atlantic Richfield Co. including Anaconda American Brass	Exxon Corporation
Initial Payment	\$390,952.10	1,278,045.20	1,074,679.99
to EPA:			
Payment to the	15,610.00	51,030.00	42,910.00
State:			
Year 1 Payment	1,014,142.93	3,315,292.35	2,787,756.12
to EPA:			
Year 2 Payment	195,027.49	637,556.22	536,106.95
to EPA:			
Year 3 Payment	195,027.49	637,556.22	536,106.95
to EPA:			

The initial payments to EPA and the payments to the State shall be made within thirty (30) days after the Cash Defendants receive written notice of the entry of this Decree and Year 1, Year 2, and Year 3 payments shall be due twelve (12), twenty four (24), and thirty six (36) months thereafter. The checks should reference the OII Site, and be addressed to:

Attachment 13

ATTACHMENT B

Work Defendants:

- 1 Allied-Signal Inc. for Garrett Airesearch
- 2 American Airlines, Inc.
- 3 Bethlehem Steel Corporation
- 4 Betz Laboratories, Inc.
- 5 Borg-Warner Corporation for Byron Jackson Pump Division
- 6 Calgon Corporation/Calgon Vestal Laboratories
- 7 Carnation Company
- 8 Chevron Chemical Company
- 9 Chevron Pipe Line Co.
- 10 Chevron U.S.A. Inc.
- 11 Conoco Inc.
- 12 Cooper Drum Company for Superior Drum
- 13 Crowley Maritime Corporation on behalf of its wholly owned
- 14 subsidiaries Crowley Towing & Transportation Co. and Crowley
- 15 Environmental Services Corporation
- 16 Deft, Inc.
- 17 Delta Air Lines, Inc. for Western Airlines
- 18 Douglas Oil Company
- 19 Dunn-Edwards Corporation
- 20 The Flying Tiger Line Inc.
- 21 GATX Terminals Corporation
- 22 General Felt Industries, Inc., a division of Knoll International
- 23 Holdings, Inc.
- 24 General Motors Company
- 25 Georgia-Pacific Corporation
- 26 Hughes Aircraft Company

- 1 Ingersoll-Rand Company for Proto Tool
- 2 Insilco Corporation for Sinclair Paint Company
- 3 Jaybee MFG
- 4 Kenosha Auto Transport Corporation
- 5 Lever Brothers Company, Inc.
- 6 Liberty Vegetable Oil Company
- 7 Long Beach Oil Development Company
- 8 Long Beach Unit, Wilmington Oil Field, California (City of Long
- 9 Beach, Unit Operator-THUMS Long Beach Company, Agent for
- 10 Field Contractor
- 11 Major Paint Company
- 12 Max Factor & Co.
- 13 Martin Marietta Corporation for Martin Marietta Carbon, Inc. and
- 14 Commonwealth Aluminum Corporation
- 15 McDonnell Douglas Corporation for Douglas Aircraft
- 16 Menasco, Inc.
- 17 Mobil Oil Corporation including Superior Oil Company
- 18 NI Industries, Inc. for Norris, Inc.
- 19 NL Industries, Inc., for NL Metals
- 20 Occidental Petroleum Corporation
- 21 Parker-Hannifin Corporation for Berteau Corporation
- 22 PPG Industries, Inc.
- 23 The Procter & Gamble Manufacturing Company
- 24 Reynolds Metals Company
- 25 Safeway Stores, Incorporated
- 26 Santa Fe Energy Company/Chancellor Western Oil Development
- 27 Shell Oil Company
- 28 Southern California Edison

- 1 Southern California Gas
- 2 Sothern California Rapid Transit District
- 3 Southern Pacific Transportation Company
- 4 Southwestern Engineering Company
- 5 Sparkletts Drinking Water Corporation
- 6 Superior Industries International, Inc.
- 7 Sun Oil Company
- 8 Texaco Inc. including Richfield East Dome Unit and Signal Hill
- 9 West Unit and subsidiaries
- 10 Transportation Leasing Company for The Greyhound Corp.
- 11 USG Corporation for Hollytex Carpet Mills
- 12 Union Oil Company of California
- 13 The Uniroyal Goodrich Tire Company
- 14 Welch's Overall Cleaning Co., Inc. for Welch's Industrial Uniform
- 15 Willamette Industries, Inc. for Western Kraft
- 16 Xerox Corporation
- 17 ///
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1 For EPA:

2 U.S. EPA

3 Superfund Accounting

4 P.O. Box 371003 M

5 Pittsburgh, PA 15251

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10 A copy of all transmittal letters and a copy of each check
11 submitted under Schedules 1 and 2 of this Attachment shall be
12 sent to the EPA, the State, and the Work Defendants' Project
13 Coordinators.

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For the State:

California Department of

Health Services

Toxics Substances Control

Division

P.O. Box 942732

Sacramento, CA 94234-7320

Attachment C

ATTACHMENT C

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS * SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
1	Chevron USA/Gulf	12,258,402	5,219	37,650	14,056,802	7.722%
2	ARCO/Anaconda	7,777,751	11	2,595	9,288,682	5.103%
3	National Can	9,040,899	0	5,652	9,046,551	4.970%
4	Texaco Inc./Getty	6,912,203	741	12,933	8,779,521	4.823%
5	Exxon USA	7,808,532	0	2,725	7,811,257	4.291%
6	McDonnell Douglas Aircraft.	6,746,625	0	15,435	6,762,060	3.715%
7	Union Oil Co.	6,238,541	0	8,964	6,247,505	3.432%
8	Morris Inc.	4,722,520	3,000	93,821	5,581,172	3.066%
9	Sun Oil Co.	5,257,980	0	6,900	5,264,880	2.892%
10	Occidental Petroleum	4,470,580	0	500	4,471,080	2.456%
11	Mobil Oil Corp.	2,536,198	12	9,088	4,272,933	2.347%
12	So. Cal. Gas Co.	3,572,588	100	5,100	3,602,724	1.979%
13	Continental Can	3,557,855	0	6,480	3,564,335	1.958%
14	Routh Transportation/I.T. Corp.	1,775,130	0	350	3,521,119	1.934%
15	Shell Oil Co.	3,440,970	0	1,940	3,442,910	1.891%
16	Powerline Oil Co.	3,382,620	0	18,542	3,401,162	1.868%
17	Santa Fe Energy/C.W.O.D.	3,029,341	0	2,301	3,390,002	1.862%
18	Martin Marietta Alum Inc	3,079,120	0	10,805	3,089,925	1.697%
19	Del Amo Energy	3,076,080	0	6,800	3,082,880	1.694%
20	Champlin Petroleum Co.	2,840,244	0	1,900	2,842,144	1.561%
21	Filtrol Corp	2,835,340	0	1,350	2,836,690	1.558%
22	Smith Tool	2,434,712	0	2,080	2,436,792	1.339%
23	Soule Steel	2,396,299	0	5,978	2,402,277	1.320%
24	Asbury Oil Co.	2,207,530	0	1,170	2,208,700	1.213%
25	Douglas Oil Co./Conoco	1,816,122	0	200	2,044,572	1.123%
26	Kay-Brunner Steel	1,756,210	0	400	1,756,610	0.965%
27	GMC	1,346,563	417	68,670	1,524,776	0.838%
28	Long Beach Oil Development	1,407,420	0	5092	1,412,512	0.776%
29	Rachelle Lab.	1,286,970	0	5,200	1,292,170	0.710%
30	Lockheed Acft.	1,282,200	0	7,900	1,290,100	0.709%
31	Beverly Hills Oil Assoc.	1,178,520	0	2,030	1,180,550	0.649%
32	Interpace Corp.	1,154,046	0	26,345	1,180,391	0.648%
33	ALCOA Vernon Works	1,104,485	0	1,470	1,105,955	0.608%
34	So. Cal. Chemical	924,700	0	62,000	986,700	0.542%
35	So. Cal. RTD	828,500	0	109,500	938,000	0.515%
36	De Merno-Kerdoon	907,200	100	300	932,508	0.512%
37	Jos. Schlitz Brewing Co.++	850,860	0	10,000	860,860	0.473%
38	Davis & Walker Wire	855,167	0	605	855,772	0.470%
39	Garrett Airesearch	854,694	0	590	855,284	0.470%
40	Argo Petroleum Corp.	842,982	0	600	843,582	0.463%

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
41	Kaiser Steel Fontana Works	818,880	0	100	818,980	0.450%
42	API Inc.	788,466	0	500	788,966	0.433%
43	American Airlines	741,710	0	28,951	770,661	0.423%
44	Betz Labs Inc.	747,191	0	5,800	752,991	0.414%
45	Bethlehem Steel Corp.	732,860	0	4,830	737,690	0.405%
46	Sinclair Paints	734,860	0	100	734,960	0.404%
47	Leach Oil Co.	691,740	0	200	691,940	0.380%
48	Department of Water & Power	682,110	36	100	691,211	0.380%
49	Emery Industries	629,420	0	4,675	634,095	0.348%
50	So. Cal. Edison Co.	631,310	4	205	632,515	0.347%
51	Textile Rubber & Chemical Co.	620,210	0	70	620,280	0.341%
52	Kern Foods Inc.	605,976	0	200	606,176	0.333%
53	Marina Pacifica	596,694	0	100	596,794	0.328%
54	Reynolds Metals	585,082	20	435	590,521	0.324%
55	Herbell Oil Co.	582,750	0	100	582,850	0.320%
56	Steel Castings	565,090	0	280	565,370	0.311%
57	Calgon Corp.	533,400	0	0	533,400	0.293%
58	Martin Oil Service Co.	514,500	0	0	514,500	0.283%
59	Eastman Central	510,780	0	65	510,845	0.281%
60	Thums Long Beach	477,120	120	100	507,226	0.279%
61	Mitchell Energy Corp.	502,110	0	100	502,210	0.276%
62	Byron Jackson Pump Div.	498,426	0	370	498,796	0.274%
63	Proto Tools	485,310	0	100	485,410	0.267%
64	Ameroil	483,420	0	0	483,420	0.266%
65	Vernon Truck Wash	468,930	0	1,125	470,055	0.258%
66	Liberty Vegetable Oil Co.	461,386	0	45	461,431	0.253%
67	Xtra Energy	460,560	0	0	460,560	0.253%
68	Edgington Oil	458,220	0	0	458,220	0.252%
69	California Milk Producers	436,326	0	16,845	453,171	0.249%
70	Alex Foods Inc.	435,965	0	445	436,410	0.240%
71	Long Beach Naval Shipyard	416,100	0	600	416,700	0.229%
72	Ameritone Paint Corp./Trewax	271,428	0	0	416,298	0.229%
73	Reichhold Chemicals	413,310	0	0	413,310	0.227%
74	McMillan Oil Co.	386,556	0	200	386,756	0.212%
75	Ladish Pacific Div.	384,972	0	100	385,072	0.212%
76	Metlox Potteries	382,326	0	0	382,326	0.210%
77	Crowley Maritime Corp.	377,520	0	4550	382,070	0.210%
78	Menasco Inc.	374,810	0	3,800	378,610	0.208%
79	Hollytex Carpet Mills	372,078	0	220	372,298	0.205%
80	Xerox Corp.	358,450	0	1000	359,450	0.197%

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
81	Wm. H. Hutchinson & Sons Serv.	346,710	0	0	346,710	0.190%
82	Major Paint & Varnish Co.	345,700	0	0	345,700	0.190%
83	Southern Pacific Transportaion	334,599	0	5220	339,819	0.187%
84	TRW Cinch Graphik	330,806	0	300	331,106	0.182%
85	Superior Drum	325,520	0	4600	330,120	0.181%
86	Anchorlok Lear Siegler Corp.	327,222	0	60	327,282	0.180%
87	Container Corporation of Amer.	318,222	0	410	318,632	0.175%
88	S. Rose Cooperage	315,660	0	1,300	316,960	0.174%
89	ACT Container Co.	315,420	0	201	315,621	0.173%
90	Superior Industries	314,694	0	125	314,819	0.173%
91	Flint Ink Corp.	313,875	0	0	313,875	0.172%
92	Hunt-Wesson Foods, Inc.	310,380	0	100	310,480	0.171%
93	Franciscan	275,856	0	15905	291,761	0.160%
94	Emerson and Cuming, Inc.	279,720	0	40	279,760	0.154%
95	B & C Plating Company	271,950	0	100	272,050	0.149%
96	Los Angeles Times-Mirror Press	270,000	0	1800	271,800	0.149%
97	Crosby and Overton, Inc.	271,320	0	100	271,420	0.149%
98	PPG Industries, Inc.	268,380	0	0	268,380	0.147%
99	Bertea Corp.	266,267	0	150	266,417	0.146%
100	Western Airlines	251,370	0	10330	261,700	0.144%
101	Southwestern Engineering Co.	260,080	0	100	260,180	0.143%
102	Uniroyal Inc.	252,400	0	4500	256,900	0.141%
103	Seaboard Oil and Gas	254,730	0	135	254,865	0.140%
104	International Paper Co.	250,330	0	330	250,660	0.138%
105	Mechanical Metal Finishing Co.	244,430	0	425	244,855	0.135%
106	Witco Chemical Corp.	244,000	0	0	244,000	0.134%
107	Red Star Industrial Serv.	217,120	0	13700	230,820	0.127%
108	Gaffers and Sattler	223,486	0	50	223,536	0.123%
109	Carnation Co.	214,610	0	5060	219,670	0.121%
110	Welch's Industrial Uniform	213,790	0	4000	217,790	0.120%
111	Fletcher Oil & Refining Co.	214,200	0	0	214,200	0.118%
112	General Felt Industries, Inc.	213,578	0	265	213,843	0.117%
113	Western Kraft Corp.	202,410	0	11400	213,810	0.117%
114	Greyhound Lines	210,450	0	50	210,500	0.116%
115	NL Metals	207,480	0	0	207,480	0.114%
116	Union Pacific Railroad	200,760	0	200	200,960	0.110%
117	McAuley Oil Co.	199,920	0	0	199,920	0.110%
118	United Airlines	194,702	0	3000	197,702	0.109%
119	Gemini Ind. Inc.	186,980	0	7000	193,980	0.107%
120	Bernard Epps and Co.	192,360	0	610	192,970	0.106%

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
121	Procter and Gamble	192,860	0	0	192,860	0.106%
122	Filon Div. of SOHIO Chem. Co.	192,570	0	200	192,770	0.106%
123	Continental Airlines	192,400	0	0	192,400	0.106%
124	Glasteel Ind. Laminates, Inc.	190,810	0	40	190,850	0.105%
125	Jaybee Manufacturing Co. Inc.	183,078	30	170	190,755	0.105%
126	Safeway Stores, Inc.	184,934	0	5550	190,484	0.105%
127	Flying Tigers, Inc.	188,036	0	2300	190,336	0.105%
128	Luxfer U.S.A. Limited	173,020	0	15500	188,520	0.104%
129	Capri Treatment Plant	174,370	0	8600	182,970	0.101%
130	Berwind Railway Ser. Co.	180,600	0	0	180,600	0.099%
131	Ameron Steel	179,720	0	50	179,770	0.099%
132	Blacktop Material Co.	179,550	0	0	179,550	0.099%
133	Tree Island Steel	179,410	0	125	179,535	0.099%
134	Zacky Foods Co.	178,190	0	250	178,440	0.098%
135	Anaheim Foundry	177,122	0	0	177,122	0.097%
136	Motor Processors, Inc.	176,370	0	0	176,370	0.097%
137	General Latex & Chemical Corp.	174,260	0	100	174,360	0.096%
138	Preco, Inc.	173,830	0	30	173,860	0.096%
139	Armco	172,720	0	0	172,720	0.095%
140	Reisner Metals, Inc.	171,150	0	0	171,150	0.094%
141	GATX Corp.	170,520	0	120	170,640	0.094%
142	HI-Production Forge	168,204	0	65	168,269	0.092%
143	Dunn-Edwards Corp.	161,541	0	4660	166,201	0.091%
144	Hughes Aircraft	161,285	0	4875	166,160	0.091%
145	Firestone Tire and Rubber Co.	160,730	0	4700	165,430	0.091%
146	EKCO Products, Inc.	163,970	0	0	163,970	0.090%
147	Cooper and Brain Oil Co.	161,700	0	250	161,950	0.089%
148	Max Factor	146,301	0	14008	160,309	0.088%
149	United Parcel Ser. of America	159,460	0	0	159,460	0.088%
150	Conrock Co.	157,570	0	0	157,570	0.087%
151	Supracote, Inc.	156,915	0	255	157,170	0.086%
152	Petro-Lewis Corp.	156,340	0	120	156,460	0.086%
153	Todd Shipyard Corp.	156,106	0	268	156,374	0.086%
154	Southwest Processors, Inc.	155,400	0	0	155,400	0.085%
155	Amtrak - National RR Passenger	152,400	0	3000	155,400	0.085%
156	Van Waters and Rogers	153,300	0	0	153,300	0.084%
157	Davidson Panel	153,048	0	0	153,048	0.084%
158	Kenosha Auto Transport	152,880	0	0	152,880	0.084%
159	American Can/Primerica	151,970	0	25	151,995	0.083%
160	Precision Heat Treating Co.	150,800	0	55	150,855	0.083%

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

Rank	Generator	Gallons	Tons	Other	Total Volume Converted to Gallons **	% of Total
161	Borden Chemical Co.	149,270	0	50	149,320	0.082%
162	Redi-Spuds of America	149,310	0	0	149,310	0.082%
163	Deft, Inc.	147,133	0	240	147,373	0.081%
164	Coca-Cola Bottling Co. of LA	144,858	0	0	144,858	0.080%
165	Owens-Illinois	144,420	0	130	144,550	0.079%
166	St. Regis Paper Co.	142,616	0	525	143,141	0.079%
167	United Foam	141,030	0	0	141,030	0.077%
168	Hydril Co.	140,550	0	0	140,550	0.077%
169	Georgia Pacific Corp.	139,310	0	330	139,640	0.077%
170	Lever Brothers	136,360	0	1460	137,820	0.076%
171	Seven-Up Bottling Co. of LA	135,730	0	0	135,730	0.075%
172	International Extrusion	134,820	0	190	135,010	0.074%
173	Royal Industries, Internat.	134,400	0	0	134,400	0.074%
174	Sparkletts Drinking Water Corp	133,547	0	400	133,947	0.074%
175	Langlois Flour	130,500	0	0	130,500	0.072%
176	B.J. Service Equipment Co.	128,730	0	180	128,910	0.071%
177	Longview Fibre Co.	127,890	0	225	128,115	0.070%
178	Capitol Metals Co., Inc.	126,140	0	100	126,240	0.069%
179	R & R Industrial Waste Haulers	105,635	0	7900	113,535	0.062%
180	Union Carbide Corp.	53,760	0	0	53,760	0.030%
181	CCA Co.	25,200	0	0	25,200	0.014%
182	Coca-Cola Company	24,458	0	0	24,458	0.013%
total=		170,925,645	9,810	806,884	182,037,702	

++ The volumes and % of total for #37 Jos. Schlitz Brewing Company should be 498630 gallons, 0 tons, 10,000 other, 508360 total volume converted to gallons and % total of 0.279% (based on 182,037,702 total volume). This corrects a clerical error made by the EPA in calculating their volumes listed above. For purposes of this decree and to avoid any changes to other parties as listed on this September 1, 1988 list, all percentages of the total shall continue to be based on the 182,370,702 gallon total. Therefore, the settlement amounts as calculated for all settling parties in this settlement are slightly less than would otherwise have been calculated but for this error.

*The Volume is based on records obtained from Operating Industries, Inc., and is subject to change as more information is gathered.

OPERATING INDUSTRIES, INC. VOLUMETRIC TOTALS *
SEPTEMBER 1, 1988

**Texaco includes Getty (1,668,790 gals)
Chevron includes Gulf (452,010 gals)
Mobil includes Superior (1,724,636 gals)
Sante Fe Energy includes C.W.O.D. (358,360 gals)
Douglas includes Conoco (228,050 gals)
ARCO includes Anaconda (1,505,585 gals)
Routh Transportation includes I.T. Corp. (1,745,639 gals)
Ameritone Paint includes Trewax (144,870 gals)

Appendix A

APPENDIX A

EPA Record of Decision
Operating Industries, Inc.
Monterey Park, California
Leachate Management Operable Unit
November 16, 1987

DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION: Operating Industries, Inc., Monterey Park, California

STATEMENT OF PURPOSE:

This decision document represents the selected remedial action for the Operating Industries, Inc. site developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Contingency Plan (NCP) (40 C.F.R., Part 300).

The State of California has concurred with the selected remedy.

STATEMENT OF BASIS:

This decision is based upon the administrative record (index attached). The attached index identifies the items which comprise the administrative record upon which the selection of a remedial action is based.

DESCRIPTION OF THE SELECTED REMEDY:

The selected remedy consists of an on-site leachate treatment using the Alternative #5 treatment process at a facility to be designed and constructed at location B as presented in the Leachate Management Feasibility Study. The selected remedy represents an operable unit consistent with the final remedial action.

Declarations

The selected remedy is protective of human health and the environment and has been determined to be cost effective and consistent with the final remedial action. This remedy attains the legally applicable or relevant and appropriate requirements of other Federal and State public health or environmental laws. This remedy satisfies the preference for treatment that reduces toxicity, mobility, or volume as a principal element. Finally, it is determined that this remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

11.16.87
Date

John Wise
John Wise
Deputy Regional Administrator
U.S. EPA Region 9

Record of Decision
Concurrence Page

Site: Operating Industries, Inc. Monterey Park, California

The attached Record of Decision package for the Operating Industries site, Monterey Park, California has been reviewed and I concur with the contents.

11/20/87
Date

Steve Anderson
Steve Anderson
Acting Deputy Regional Counsel
Office of Regional Counsel

9/28/87
Date

Jeff Zelikson
Jeff Zelikson
Acting Director
Toxics & Waste Management Division

9/25/87
Date

Harry Seraydarian
Harry Seraydarian
Director
Water Management Division

9/25/87
Date

David P. Howe, Jr.
David P. Howe, Jr.
Director
Air Management Division

9.24.87
Date

Charles W. Murray, Jr.
Charles W. Murray, Jr.
Assistant Regional Administrator
Office of Policy and Management

DEPARTMENT OF HEALTH SERVICES

714 744 P STREET

SACRAMENTO, CA 95834



November 16, 1987

Mr. Keith A. Takata, Chief
Superfund Programs Branch
U.S. Environmental Protection
Agency - Region IX
215 Fremont Street, T-4
San Francisco, CA 94105

Dear Mr. Takata:

Keith,

LEACHATE MANAGEMENT FEASIBILITY STUDY, OPERATING INDUSTRIES, INC., LANDFILL
SITE

We have reviewed the subject study and agree with the preferred alternative of on-site treatment, as presented therein. We feel that this alternative is more protective of public health and the environment than the other alternatives presented, and provides the best solution to the interim management of leachate and other liquids generated at the site.

Regarding the siting of the proposed treatment facility, we believe it should be located as close to the site as feasible. In this regard, we are in agreement that the northern 45-acre parcel is a suitable site for this purpose.

Please call me or Angelo Bellomo at (213) 620-2380 if you wish to further discuss this matter.

Sincerely,

Alex R. Cunningham
Alex R. Cunningham
Chief Deputy Director

cc: C. David Willis
Angelo Bellomo

Decision Summary
Operating Industries, Inc.
Monterey Park, California

September 1987
Prepared by Kevin I. Dick
Enforcement Response Section
Superfund Programs Branch
Toxics and Waste Management Division
United States Environmental Protection Agency
215 Fremont Street
San Francisco, California 94105

Decision Summary
Operating Industries, Inc. Site
Monterey Park, California

Site Location and Description

The Operating Industries, Inc. (OII) site is located approximately 10 miles east of Los Angeles in Monterey Park, California (see Figure 1). The OII site consists of a 190-acre landfill which was operated from 1948 to 1984 and was used for disposal of municipal and industrial waste. The landfill contains hazardous waste and hazardous substances and was listed on the National Priorities List in May, 1986.

The Pomona Freeway divides the site into a 45-acre northern parcel and a 145-acre southern parcel. The top of the south parcel of the landfill is about 150 to 250 feet above the ground surface and the bottom of the landfill is about 200 feet below ground surface. Elevation of the upper surface of the south parcel of the landfill is about 620 to 640 feet above Mean Sea Level (MSL).

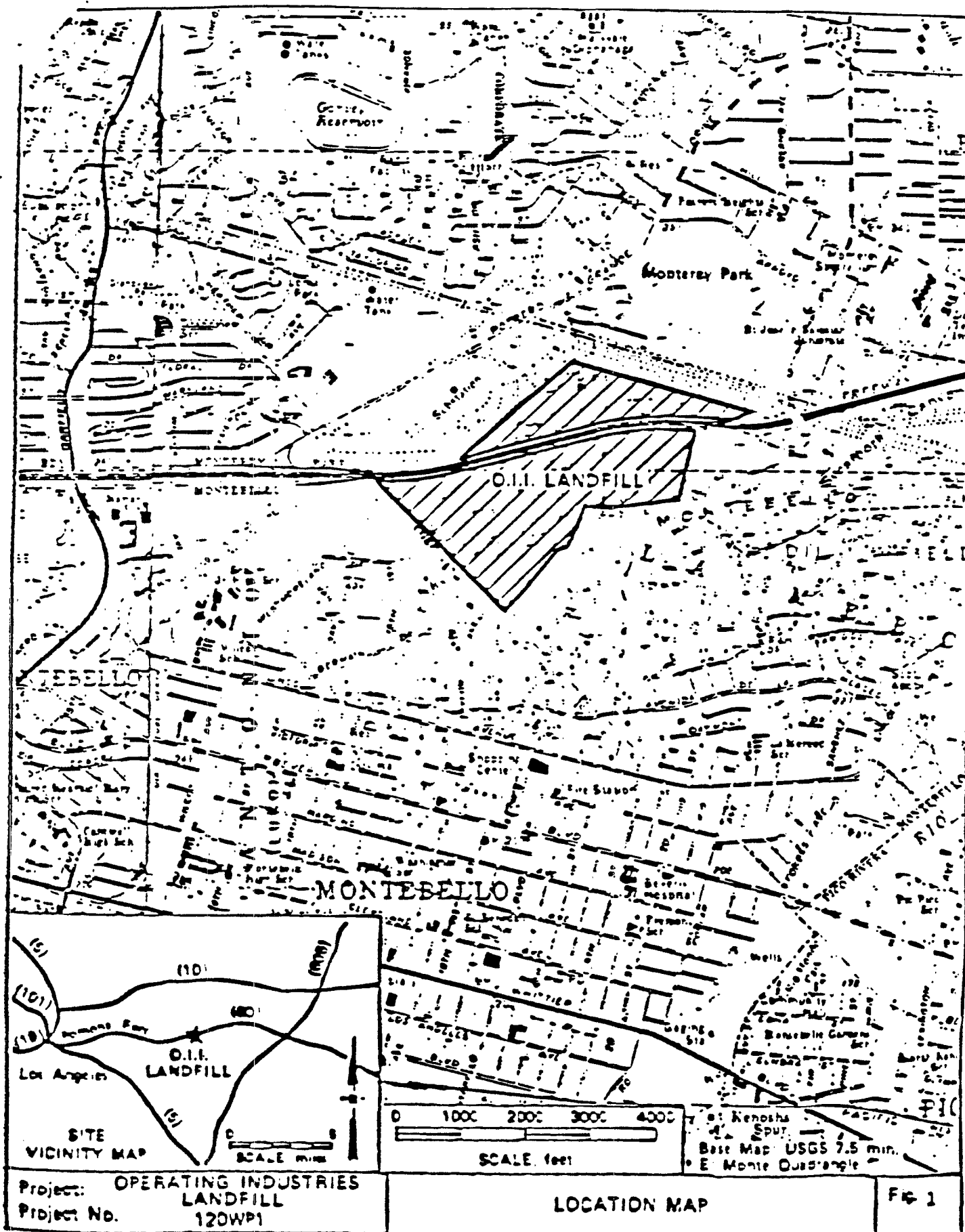
The OII site is presently owned by the former operators, Operating Industries, Inc. The EPA has been conducting site control and monitoring (SCM) activities at the site since OII ceased performing these activities in May, 1986. In addition, EPA has conducted a number of emergency actions to mitigate potential threats to public health and the environment. The site has become more stabilized as a result of the SCM activities and the emergency actions.

The City of Monterey Park has a population of 54,338 (1980 Census). The City of Montebello, which borders the southern parcel of the landfill, has a population of 52,929 (1980 Census). Several residences of Montebello are located immediately adjacent to the boundaries of the landfill. Within a three-mile radius of the site, there are approximately 53,000 residences.

The perimeter of the southern parcel of the landfill is fenced. Entrance is restricted and 24-hour security is provided. Several businesses are currently operating on the northern 45-acre parcel. These businesses have a lease arrangement with the operators.

Site History

Landfill operations at the site began in 1948. From 1948 to 1952, the site was used by the City of Monterey Park to dispose of municipal garbage. Prior to 1948, the site and surrounding areas were quarried for sands and gravels. In January 1952, the



site became a privately-owned landfill under the ownership of OII. From 1952 to 1984, the site was operated as a landfill for municipal and industrial liquid and solid wastes. In 1974, the Pomoná Freeway was constructed. The freeway split the landfill into a north and a south parcel. In June 1975, waste disposal operations were curtailed in the northern parcel. Operations were then limited to the area south of the freeway.

On October 6, 1954, the Regional Water Quality Control Board (RWQCB) first permitted disposal of liquids at OII which was known as Monterey Disposal Company Dump at that time. Some of these liquids, and some liquid industrial wastes disposed prior to the Board's permit, are considered to be hazardous by current Federal and State statutes and regulations. In 1975, a 32-acre area in the western part of the southern parcel was established as the area of liquid waste disposal and was permitted to accept Class II-1 wastes. Waste disposal operations ceased in October 1984.

The OII site was placed on the California Hazardous Waste Priority List in January 1984. The OII site was proposed for the Federal National Priority List (NPL) of uncontrolled hazardous waste sites in October 1984 and was finalized on the NPL in May 1986.

Over its 36-year life span, the OII landfill has accepted the following types of wastes: residential and commercial refuse; water-insoluble, nondecomposable inert solids; liquid wastes; various hazardous wastes including wastewater treatment sludge from production of chrome oxide green pigment; and slop oil emulsion solids and tank bottom sludges (leaded) from petroleum refining operations.

In 1974, Getty Synthetic Fuels, Inc. (GSF) entered into a contractual relationship with OII for the extraction of gas from the landfill for processing and sale to Southern California Gas Company. GSF's gas extraction system went into operation in 1979. In March, 1986, GSF ceased its gas processing activities and applied to the South Coast Air Quality Management District (SCAQMD) for a permit to construct an electrical generating plant. At that time, GSF began to flare the extracted gas in an incinerator until final permits for construction of the electrification plant were issued. GSF also applied for a permit from the City of Monterey Park for discharge of treated effluent to the sewer. In January, 1986 the City of Monterey Park denied GSF's permit. As a result, GSF decided to abandon their extraction operations at the OII landfill as of March 1, 1987. EPA took over operation of the GSF system in June, 1987.

Both landfill gas and leachate are generated by the OII site. From April 1983 to October 1984, about 25,000 gallons of leachate per day was collected by OII's leachate collection system and disposed of by mixing with the incoming solid waste. Since then, collected leachate has been stored on-site in Baker tanks, and transported to a permitted off-site treatment facility.

The leachate generated at the OII site is a hazardous waste as defined by RCRA 261.3 regulations and contains hazardous organic constituents such as vinyl chloride, trichloroethylene, benzene and toluene.

Land uses around the landfill began to undergo significant changes in 1974. These changes included construction of the Pomona Freeway (1974), and increased residential development within Montebello City limits to the southwest (1975) and south (1976) of the facility. A residential area is directly adjacent to portions of the southern and western boundaries of the landfill.

Discussion of Past Activities

A number of site problems have been identified by State and Federal regulatory agencies. These include:

- Hazardous leachate seepage and breakthrough on the landfill slopes.
- Subsurface and off-site migration of leachate.
- High landfill gas (methane) levels exceeding the lower explosive limit in nearby residential areas.
- Vinyl chloride present in ambient air emissions and in subsurface gas on-site and off-site.
- Underground fires and associated subsidence on-site.
- Slope instability and erosion problems.
- Surface runoff from the elevated fill area.
- Groundwater contamination from leachate and migrating landfill gas.
- Noxious and offensive odors on- and off-site.

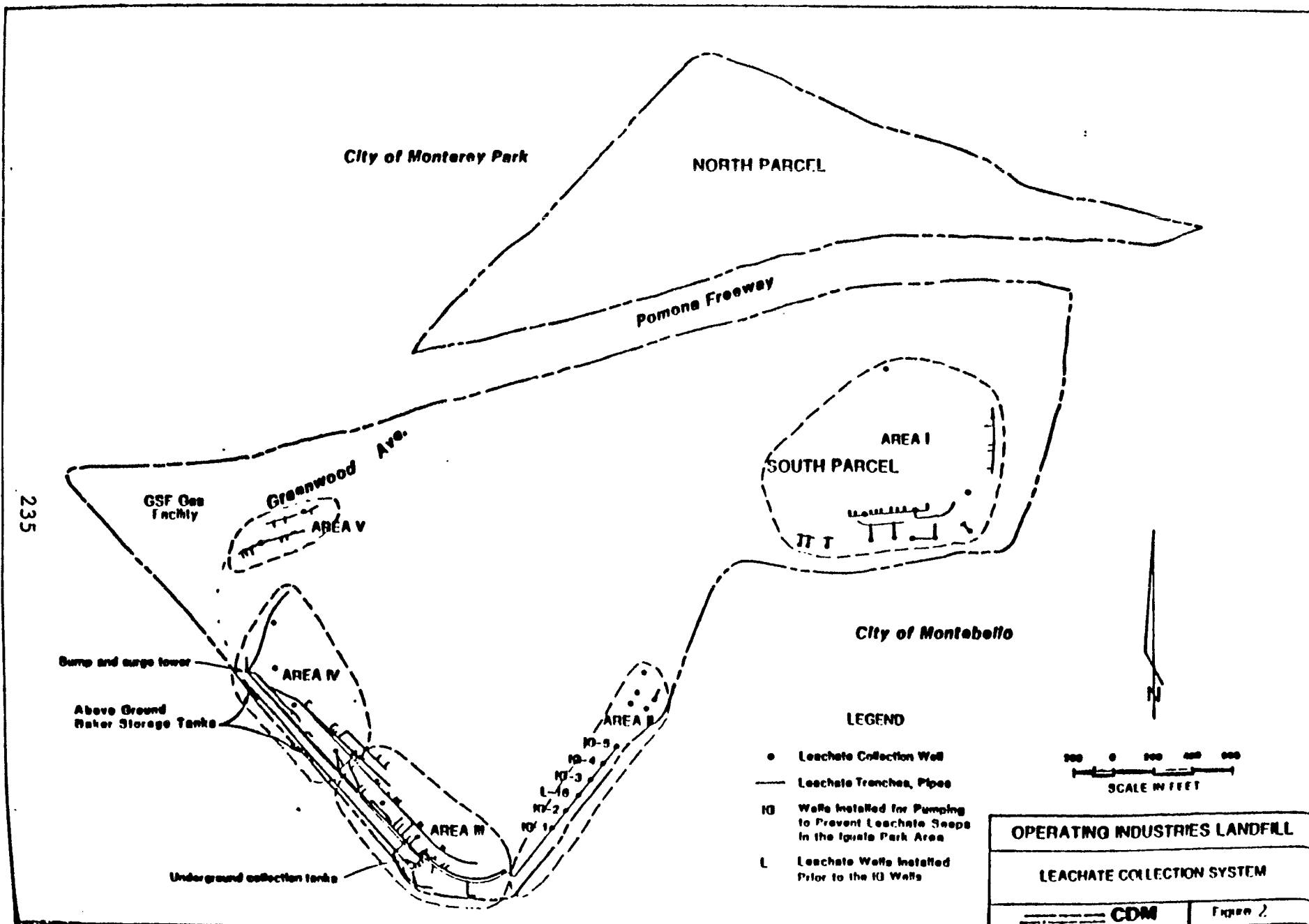
Partial control measures performed on-site by the owner in prior years include:

- Installation of a leachate collection system.
- Development of an air-dike air injection system on the west side of the site to control subsurface gas migration.
- Installation of gas extraction wells around the perimeter (except for the air-dike area) of the site and a gas flaring station.
- Site contouring, slope terracing, and vegetation.
- Covering refuse with additional fill.

The partial control measures instituted by the owner were insufficient to maintain site integrity and the EPA, therefore, instituted emergency response actions in order to protect public health, welfare and the environment. Emergency actions performed to date by EPA include:

- Slope stability and erosion control improvements, including construction of a toe buttress.
- Surface runoff and drainage improvements.
- Rehabilitation of the main flare station.
- Site security.
- Placement of vented water meter box covers off-site.

The owner/operator's ability to control the environmental problems and maintain the control systems began to diminish significantly in late 1984 when it notified EPA and the California Department of Health Services (DOHS) that it could no longer afford to truck leachate offsite for treatment. EPA conducted the leachate trucking and treatment for several months. Subsequently, DOHS assumed responsibility for this activity, while OII continued to attempt to operate and maintain remaining on-site control systems. On May 19, 1986, OII notified the State that they intended to discontinue all site control and monitoring activities on the site except irrigation. The EPA therefore assumed these activities on May 20, 1986. SCM activities then continued to be performed by EPA with the State DOHS providing leachate trucking and treatment and OII providing on-site irrigation. On December 15, 1986, the State transferred responsibility for leachate trucking and treatment to the EPA. EPA has also requested that OII allow EPA to assume full responsibility for irrigation of the site because EPA believes OII has not properly conducted the activity.



235

CURRENT SITE CONDITIONS

Interim actions have been undertaken at the landfill to control and prevent leachate seeps from occurring. A leachate collection system was installed in the early 1980's by OII and was subsequently expanded on an as-needed basis in response to on- and off-site surface seepage. Leachate generated from the site is collected by a combination of shallow collection drains and deeper leachate wells. There are five areas on the site in which leachate collection systems are located. These are shown on Figure 2 and are detailed below.

Area I

Area I on the southeast side of the site consists of trenches, perforated pipes, and leachate disposal wells drilled into dry refuse. Liquid waste disposal was not permitted on this portion of the landfill. However, there have been leachate seeps within this area. With the installation of the collection system, the seeps have apparently been controlled. Seismic studies of the landfill, performed for EPA by Woodward Clyde Consultants (WCC) indicate the absence of any extensive amounts of liquids in this area.

Immediately south of Area I, along the base of the landfill, a toe buttress was recently constructed to stabilize the slopes. A continuous drain was installed within the toe buttress. Leachate collected from this drain is transported to one of three concrete storage tanks which is periodically pumped out by a vacuum truck.

Area II

The Area II leachate collection system in the lower south-east portion of the site consists of the six Iguala wells. The Iguala wells were installed to prevent leachate seeps in the Iguala Park area south of the OII boundary. The wells are 70 to 80 feet deep, generally extending through approximately 10 to 15 feet of landfill rubbish and into the native earth material. The wells are equipped with electrically powered submersible pumps. Leachate collected from the wells is pumped into a collection manifold pipe connecting the six wells to the underground tanks in leachate collection Area III. There are five other wells in Area II which are not connected to the collection system. In the past, leachate has been pumped from these wells into vacuum trucks. There is no record of pumping for the past several years.

Two new collection wells were installed in 1986 as part of the emergency response actions for the site. These wells are part of the collection system installed to prevent seeps in the Iguala Park area. The wells are located 50 feet to either side of well #L-18.

Area III

The leachate collection system in Area III, on the southwest corner of the site, consists of a series of buried, perforated pipes and trenches discharging into three buried steel tanks. The buried steel tanks consist of one 3,500 gallon tank which has the upper part of both ends perforated, an 8,000 gallon tank, and a 10,000 gallon tank. Each tank can be individually emptied through pumping. The tanks are resting in a gravel bed which can also be pumped to remove leachate collected within the gravel bed surrounding the tanks. The 3,500 gallon tank, with perforations in the upper part of each end, is designed to collect leachate in the gravel bed surrounding the cluster of tanks. All three tanks are from old vacuum trucks and do not meet current regulations for underground tanks.

Southwest and down-slope of the buried tanks, along the boundary of OII, is a french drain system which flows to a 36-inch diameter unlined sump. Leachate is pumped from the sump to the buried tanks.

Area IV

Leachate collected in the buried tanks in Area III is pumped to three 20,000 gallon, above-ground storage tanks (Baker tanks) located in the vicinity of the surge tower in Area IV. Leachate is removed from the storage tanks by a vacuum truck and transported off-site for treatment and disposal. During the period from April 1983 through October 1984, the leachate was trucked to and disposed of in the active landfill working area.

The main leachate collection system in Area IV on the western side of the site is similar to the system in Area III, consisting of perforated pipe and trenches which feed to an unlined, 36-inch diameter sump in the vicinity of the surge tower. The surge tower serves as a standpipe providing adequate head to gravity flow leachate into the buried tanks in Area III.

Area V

The leachate collection system in Area V is very similar to the system in Area I, consisting of trenches, perforated pipe and leachate disposal wells drilled into dry refuse. It is believed that leachate seeps occurred in this area during the stockpiling of dirt immediately up-slope. The existing system in Area V is apparently controlling surface seeps in this area.

In December 1986, approximately 97,000 gallons of leachate were hauled off-site for treatment and disposal. This represents a daily average generation of approximately 3,125 gallons of leachate. EPA has initiated emergency response actions to

repair and improve the existing leachate collection system. These repairs and improvements were necessary to reduce the potential for groundwater contamination from leaking underground tanks, and to improve the effectiveness of the collection system to reduce the potential for off-site migration of leachate. Additional improvements are still necessary to improve the existing collection system.

Historically, EPA has collected between 5 and 6 thousand gallons of leachate per day. EPA believes the volumes of leachate and other hazardous liquids from the site requiring safe management will increase in the future. The expected increase is based on the following factors:

- The present OII leachate collection system is an inadequate and poorly designed system in various states of disrepair. EPA plans to replace and improve many portions of the existing system. These improvements should increase the efficiency of the collection system and consequently increase the volume of leachate collected.
- The existing system may be expanded to de-water inundated gas extraction wells and perimeter gas monitoring probes.
- The condensate collected at the OII flare station was recently connected to the leachate collection system. Drip legs in the gas system, which currently re-inject condensate into the landfill, may be replaced with a condensate collection system. Connecting this system to the leachate collection system may result in an increase of several thousands gallons of liquid collected per day.
- EPA has assumed operation of the GSF gas extractions system. Condensate generated by the GSF system will also be disposed of into the leachate collection system. This would represent an additional volume of 300 gallons per day. Additional volumes may be collected in the future when EPA addresses the condensate currently being recirculated into the landfill.
- Extraction of deeper leachate within the landfill in the future could further increase the volume of leachate collected.
- Contamination has been detected in the groundwater in the site vicinity. Extraction and treatment of groundwater may be required in the future. A pre-treatment plant could potentially be used for treating this contaminated water also. During the hydrogeology investigation, the water generated by well development, purging, and pump testing may have to be treated prior to discharge.

In light of the factors listed above, a collection rate of 10,000 gallons per day is considered a good estimate for the purpose of formulating remedial action treatment alternatives and cost comparisons.

LEACHATE CHARACTERIZATION

Based on review of over 70 sets of sampling data from the past 42 months (January 1983 through July 1986), the quality of leachate obtained from the OII landfill exhibits a high degree of variability. No consistent sampling and analysis program extending beyond a few months has ever been undertaken and data reviewed illustrate the lack of consistent results and difficulty in assessing the characteristics of a representative sample of leachate. Although quality assurance information on some of the leachate data was not readily available, inclusion of all results to summarize leachate quality was believed to be appropriate to fully characterize the potential range of contaminant levels which may be present in OII leachate and to therefore evaluate the degree of flexibility which must be considered for treatment.

The OII leachate can be described as a darkly colored liquid with a moderate petroleum and/or musky odor. Past analysis results have been highly variable and indicate that leachate may contain a wide array of organic and inorganic pollutants including oil and grease, volatile organics, semivolatile organics, sulfides, a variety of heavy metals, and high levels of chemical oxygen demand, suspended solids, and total dissolved solids.

A summary of the range of several selected constituents found in OII leachate is presented below:

<u>Parameter</u>	<u>Range of Values</u> (mg/L except pH)	
	<u>Minimum</u>	<u>Maximum</u>
pH	6.6	8.5
oil and grease	6	296,800
Chemical oxygen demand	750	31,000
Suspended solids	62	62,800
Total dissolved solids	7,226	16,300
Ammonia	720	927
Vinyl Chloride	ND	0.50
Methylene chloride	ND	16.3
Toluene	ND	10.0
Xylene isomers	ND	5.0
1,4-Dioxane	ND	19.0
bis(2-ethylhexyl) phthalate	ND	60.0
Phenol	ND	1.8
Sulfides	ND	13.0
Chromim	ND	4.81
Arsenic	0.026	4.52
Zinc	0.06	18.0
Sodium	2,200	4,500
Calcium	116	367

ND: Not Detected

As illustrated in the table above, many of the EPA Target Compounds (TC) have been identified in OII leachate at various times during the past few years. Heavy metals such as chromium, arsenic, zinc, cadmium, copper, lead, nickel, mercury, and selenium which are TCs have been found during elemental analysis of leachate and have ranged from below detection limits to several milligrams per liter. Average and median values of heavy metals in the leachate indicate that they are commonly found in concentrations of less than one milligram per liter and are represented by common mono and divalent species such as sodium, potassium, magnesium, calcium and iron. This conclusion was further substantiated by the high quality NEIC analysis which identified heavy metal ranging from detection limits to 340 micrograms per liter and common metals ranging from 16 to 3400 milligrams per liter.

Over one-third of the organic TCs as well as a variety of non-TCs have been detected at least once in an OII leachate sample. Organics which have been frequently identified in leachate include volatile aromatic compounds such as benzene, dichlorobenzene, ethyl benzene, toluene and xylene isomers, volatile halocarbons such as 1,1-dichloroethane, methylene chloride and vinyl chloride, and other volatile constituents such as acetone, methylethyl ketone and dioxane isomers. Several semivolatile TCs were also frequently identified including several phenol species, several phthalate esters, naphthalene, phenanthrene and 2-methylnaphthalene. These organics, along with many less frequently detected organic constituents, have been found to be present in leachate at levels ranging from detection limits to several milligram per liter. Average and median values for organic TCs indicate that they are usually present in concentrations of several hundred micrograms per liter or less. The high quality NEIC analysis generally substantiated this conclusion although high levels of 1,4 Dioxane (13 mg/l), 2-methyl-2-butanol (1.4 mg/l), 2-methyl-2-propanol (2.0mg/l) and bis (2 ethylhexyl) phthalate (1.1 mg/l) were identified in this particular sample.

Several analyses for organic constituents in OII leachate have indicated the presence of a complex organic matrix which consists largely of undifferentiated weathered hydrocarbon species which are not normally identified using conventional gas chromatographic and gas chromatographic/mass spectroscopic techniques. Occasionally, analyzing laboratories have estimated the concentrations of organic acids and n-alkanes present in leachate. One set of results for a leachate sample taken in June of 1984 reported estimated levels of butanoic, pentanoic and hexanoic acids at levels of 1.6, 1.9, and 3.1 milligrams per liter respectively. Other labs have estimated the levels of various n-alkanes (from 9 to 31 carbons) on several occasions and have reported total levels of several hundred milligrams per liter. The high quality NEIC analysis quantified the n-alkanes at a total level of 1.4 mg/l. It was also was estimated, based on a total ion count for the chromatograms, that the total concentrations of hydrocarbon materials in this sample

was 70 mg/l, most of which could not be specifically identified. Analysis showed that 68 percent of the dissolved organic carbon in the NEIC leachate sample could be attributed to organic acids.

In addition to metal and organic pollutant level determination, the concentrations of many other contaminants have been quantified in samples of OII leachate. The pH of the leachate has generally been neutral or slightly basic. Oil and grease, chemical oxygen demand, and suspended solids have been found in highly variable concentrations with median values of 473 mg/l, 4,690 mg/l and 628 mg/l, respectively. Dissolved solids levels have been more consistent at mean and median levels of approximately 11,500 mg/l. Ammonia levels in OII leachate average approximately 820 mg/l based upon the two sets of results reviewed.

Based upon a review of the over 70 sets of available analytical data characterizing OII leachate, this waste was found to have a high strength character. The results were highly variable with respect to levels of specific organic and inorganic constituents, thus making the determination of a "representative sample" of leachate difficult. However, general categories of pollutants for which removal through treatment would be necessary are currently identified as oil and grease, metals, organics, and sulfides.

Community Relations

A history of the community relations activities at the OII site, the background on community involvement and concerns, and specific comments on the Feasibility Study and EPA's responses are found in the attached Responsiveness Summary.

Alternatives Evaluation

Remedial Action Objectives:

The following objectives and considerations guided the formulation of remedial action alternatives for management of leachate and other hazardous liquids collected at OII.

- The Remedial Action must be easily and rapidly implementable and have the potential to be integrated into the final remedy for the site.
- The alternatives must be flexible in order to manage both short- and long-term variations in the leachate collection rate and in the chemical characteristics of the leachate.
- Remedial actions which included treatment to permanently and significantly reduce the volume, toxicity, or mobility of OII leachate contaminants were preferred.

Initial Screening of Alternatives:

EPA identified the following alternatives for managing leachate and other hazardous liquids collected at the Operating Industries, Inc. Superfund site.

- No Action
- Off-site disposal without treatment
- Off-site treatment
- On-site disposal without treatment
- On-site treatment

Of these alternatives, only on-site and off-site treatment remained after performing the initial screening of alternatives in the "Leachate Management Feasibility Study, Operating Industries, Inc. Landfill Site", March 1987.

The no-action alternative, which consists of termination of pumping from the Iguala Wells, the sumps in Areas III and IV, and the underground leachate collection tanks, would result in overflows and off-site seepage into nearby residential areas. Uncontrolled seeps from the south and southwest boundaries of the landfill would expose a potentially large number of people living and working in the adjacent areas to OII leachate. An analysis of the target pollutants identified in the leachate has indicated that exposure to OII leachate, leachate vapors or leachate-contaminated soil by inhalation, dermal contact or ingestion presents a potential human health hazard. The no-action alternative would endanger the environment surrounding the site by allowing leachate to contaminate air, soil, and groundwater.

The off-site disposal alternative for the OII site involves the pumping of Iguala Wells, sumps, and underground tanks to the above-ground storage tanks which would be hauled a minimum of 200 miles in vacuum trucks to an off-site RCRA disposal facility. This alternative was eliminated from further consideration as its cost exceeds the costs of other alternatives evaluated without providing greater protection of public health and the environment. Additionally, off-site land disposal is not a preferred method under CERCLA which establishes a preference for response actions that use treatment, reuse, or recycling. New EPA land disposal policy prohibits land disposal of dioxins and solvents. Thus, off-site disposal of free liquids may not be possible over the long-term.

The on-site disposal alternative involves the continued pumping of the Iguala wells, sumps, and underground tanks to the above-ground storage tanks. The leachate is then pumped

to on-site surface impoundments. On-site disposal will not adequately protect public health and is not a preferred alternative as volatile organic constituents present in the leachate would pass into the atmosphere and pose a threat to nearby communities. Additionally, there is a proposed California state regulation forbidding the disposal of untreated hazardous wastes into evaporation ponds which could prevent on-site disposal over the long-term.

Two on-site treatment alternatives were eliminated due to their failure to meet effluent discharge requirements and/or public health concerns. The first treatment alternative was developed as a minimal treatment process and included gravity separation or clarification with discharge of effluent to the LACSD sanitary sewage system. This alternative would remove oil and grease but would not effectively remove soluble heavy metals, sulfides, cyanides, or water soluble organic constituents which would consequently be discharged to the sanitary sewer.

The second eliminated alternative consisted of the gravity separation, rapid mix coagulant addition, dissolved air flotation and filtration process train followed by air stripping without off-gas treatment and granular activated carbon adsorption with sewerage of the effluent. This alternative would fail to treat off-gas from the air stripping tower. Transferring hazardous substances from the liquid to gas phase is not a permanent method of reducing the toxicity or mobility of these pollutants. In addition, uncontrolled emissions could lead to further degradation of air quality at the site and to the potential for public health problems. For these reasons, this alternative was eliminated from further consideration.

A summary of the initial screening of alternatives is presented in Table 1.

Detailed Evaluation of Alternatives

Off-site treatment and four on-site treatment alternatives were further evaluated based on the detailed evaluation criteria of the "EPA 1985 Feasibility Study Guidance" and the factors presented in Section 121 (b)(1)(A-G) of SARA. These criteria are:

- Technical feasibility (performance, reliability, implementability)
- Institutional considerations
- Protection of public health
- Environmental protection

TABLE 1

SUMMARY OF INITIAL SCREENING OF ALTERNATIVES

Alternative	Results of Initial Screening	Reason for Elimination
No Action	Eliminated	Potential adverse public health and environmental effects
Off-site treatment	Consider further	-----
Off-site disposal	Eliminated	Potential adverse public health effects, EPA policy, permanency, cost
On-site disposal	Eliminated	Potential adverse public health effects, permanency
<u>On-site treatment</u>		
Alt.1 - Gravity separation sewer disposal	Eliminated	Potential adverse health and environmental effects, permanency
Alt.2 - Gravity separation, coagulation addition, DAF, filtration, air stripping with off-gas treatment sewer disposal	Consider further	-----
Alt.3 - Same as Alt.2 with GAC replacing air stripping/off-gas treatment	Consider further	-----
Alt.4 - Same as Alt.3 with air stripping without off-gas treatment added prior to GAC	Eliminated	Potential adverse health effects, permanency
Alt.5 - Same as Alt.4 with off-gas treatment added	Consider further	-----
Alt.6 - Same as Alt.5 with UF/RO added and reuse of effluent	Consider further	-----

- Cost-effectiveness: Cost-effectiveness over the interim (5 year) period was evaluated.

The SARA Section 121 (b)(1)(A-G) factors are:

- A) The long-term uncertainties associated with land disposal.
- B) Goals, objectives, and requirements of the Solid Waste Disposal Act.
- C) The persistence, toxicity, mobility, and propensity to bioaccumulate of hazardous substances and their constituents.
- D) Short- and long-term potential for adverse health effects from human exposure.
- E) Long-term maintenance costs.
- F) Potential for future remedial action costs if the alternative remedial action in question were to fail.
- G) Potential threat to human health and environment associated with excavation, transportation, and redisposal or containment.

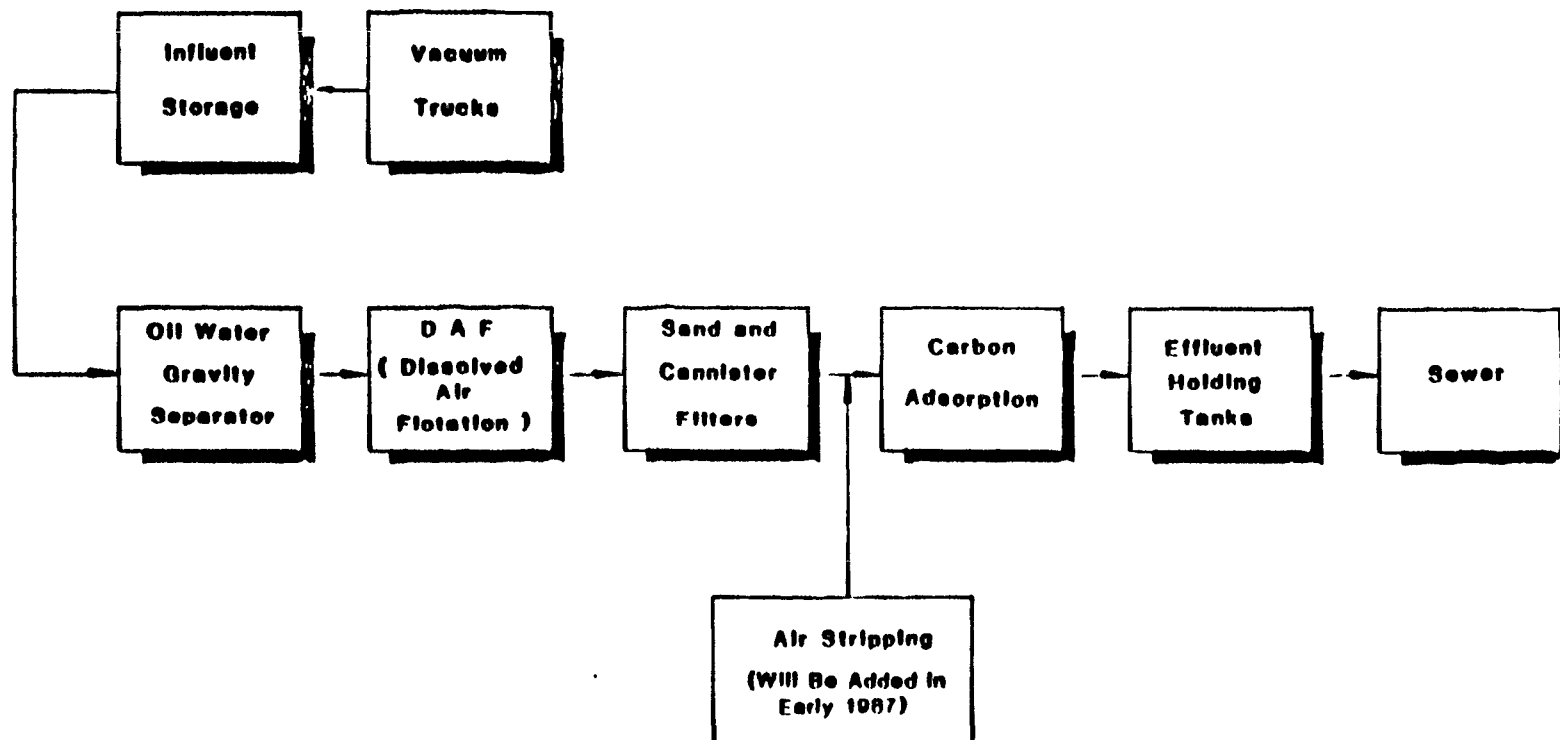
Description of Alternatives

Off-site Treatment:

Off-site treatment is the method currently used to manage leachate and other hazardous liquids generated at the OII site. Leachate is hauled by vacuum truck to an off-site treatment facility where it is treated and the effluent discharged to the Los Angeles County Sanitation District (LACSD) sewer system. Two facilities in Southern California are currently permitted and capable of treating the leachate. The treatment process used at one of these facilities is illustrated in Figure 3.

On-site Treatment:

The on-site treatment alternative for managing OII leachate involves the construction and operation of a leachate treatment facility at the landfill site. The following four alternative treatment plant configurations were evaluated for

**OPERATING INDUSTRIES LANDFILL****CHEMTECH
LEACHATE TREATMENT PROCESS**environmental engineering services
planning & management consultants **CDM****Figure 3**

treatment of the leachate:

Alternative #2

Gravity separation --> coagulant addition --> dissolved air flotation --> air stripping with vapor phase carbon adsorption ... discharge

Alternative #3

Gravity separation --> coagulant addition --> dissolved air flotation --> filtration --> liquid phase granular activated carbon adsorption ... discharge

Alternative #5

Gravity separation --> coagulant --> dissolved air flotation --> filtration --> air stripping with vapor phase carbon adsorption --> liquid phase granular activated carbon adsorption ... discharge

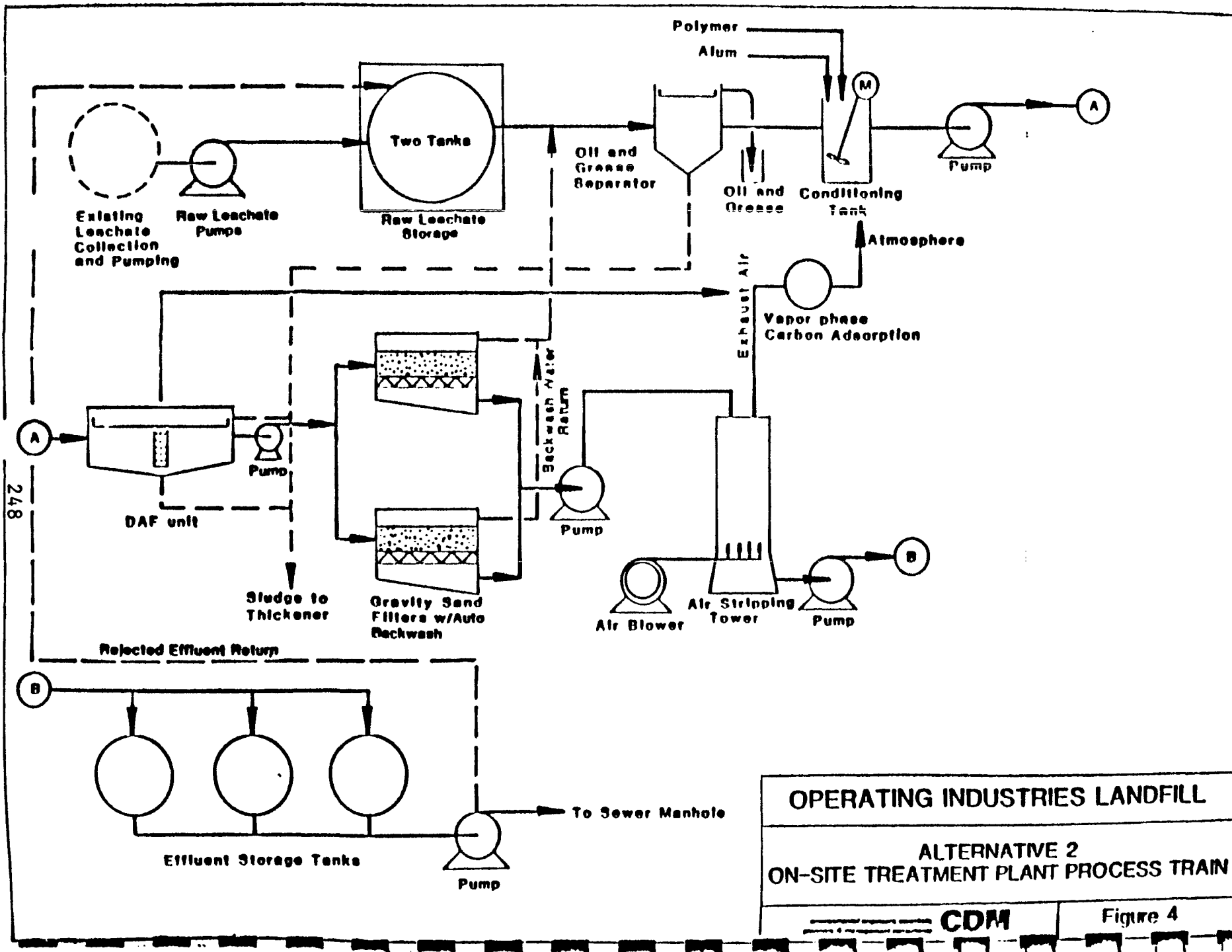
Alternative # 6

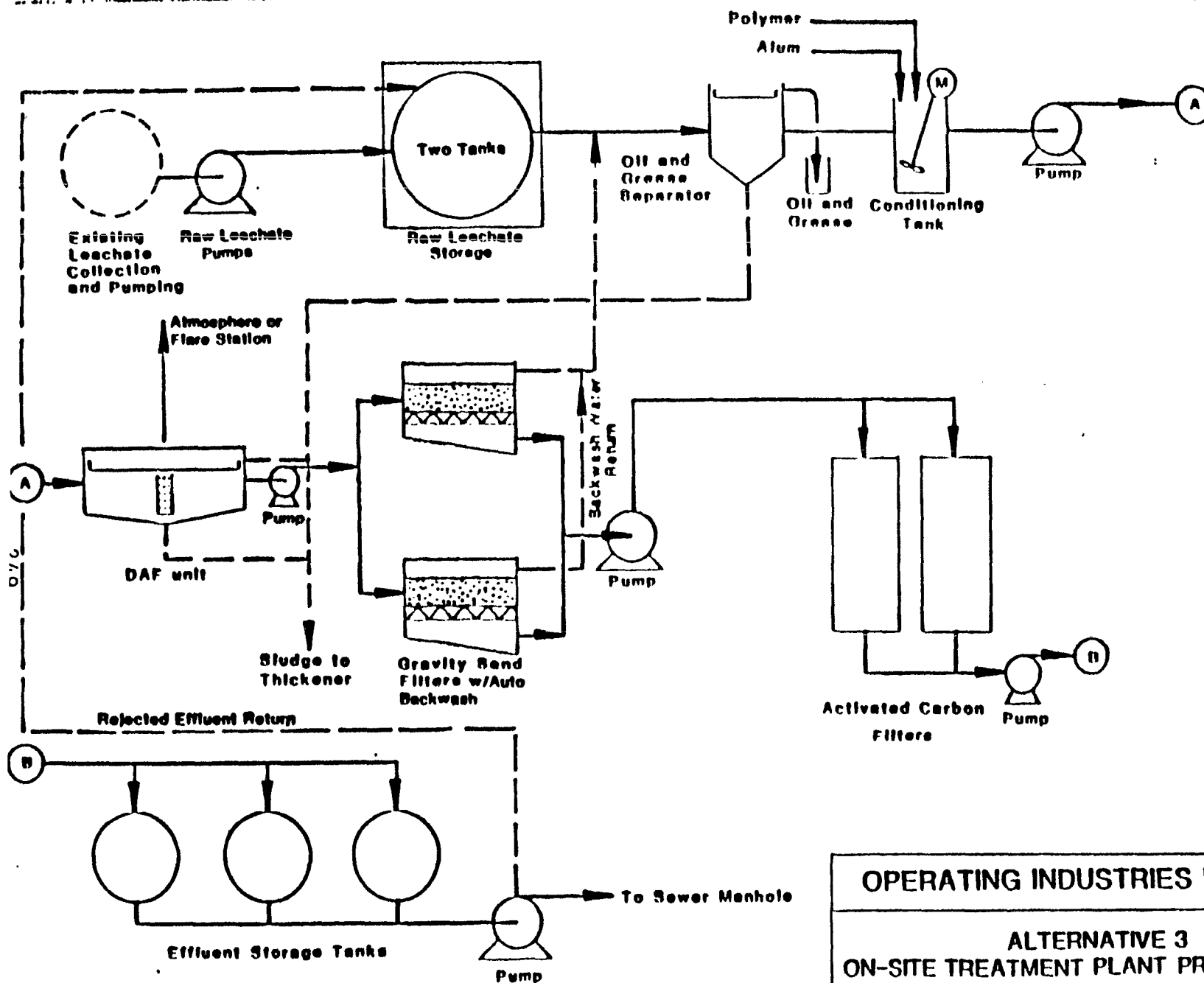
Gravity separation --> dissolved air flotation --> filtration --> air stripping with vapor phase carbon adsorption --> liquid phase granular activated carbon adsorption --> ultra-filtration --> reverse osmosis ..reuse and/or discharge

Description

The unit processes for removal of oil and grease and heavy metals are the same for the four on-site treatment alternatives (Alternatives 2,3,5 and 6). The processes for the removal of the organic compounds vary between on-site treatment Alternatives 2,3, and 5. A schematic of the Alternative 2 process train is shown in Figure 4. Without granular activated carbon (GAC) adsorption following air stripping, it is unlikely that the treated leachate would consistently meet the requirements for total toxic organic removal needed for an off-site wastewater discharge permit. However, this alternative does reduce the threat from the hazardous leachate and provides significant protection to public health and welfare and the environment.

On-site treatment Alternative 3, as depicted schematically in Figure 5, uses GAC adsorption without air stripping. The carbon adsorption unit is utilized for the removal of both the volatile and semi-volatile organics. Although the GAC unit may





OPERATING INDUSTRIES LANDFILL

ALTERNATIVE 3
ON-SITE TREATMENT PLANT PROCESS TRAIN

environmental engineers architects
planners & management consultants **CDM**

Figure 5

not efficiently remove small polar organic constituents, it is likely that the treated leachate would consistently meet the ARARs.

On-site treatment Alternative #5, shown in Figure 6, includes both air stripping and GAC adsorption. This process train is configured in order to achieve a level of leachate treatment that will attain discharge requirements. Air stripping is added to reduce the organic load on the GAC unit and would extend the life of the carbon.

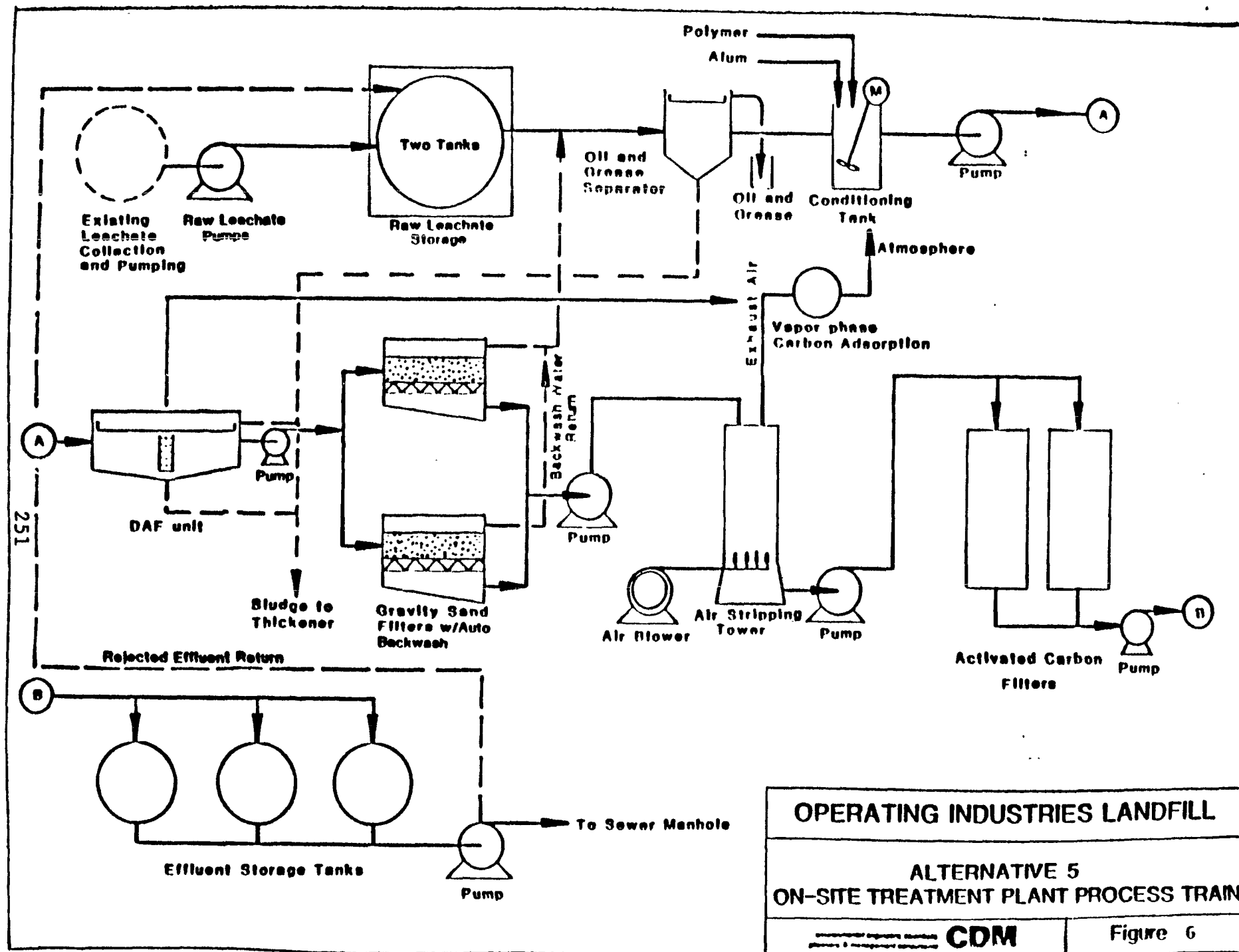
On-site treatment Alternative 6, shown schematically in Figure 7, adds ultrafiltration and reverse osmosis to the process train of on-site treatment Alternative #5. These units would allow for the production of effluent of irrigation reuse quality, and thus would exceed LACSD standards.

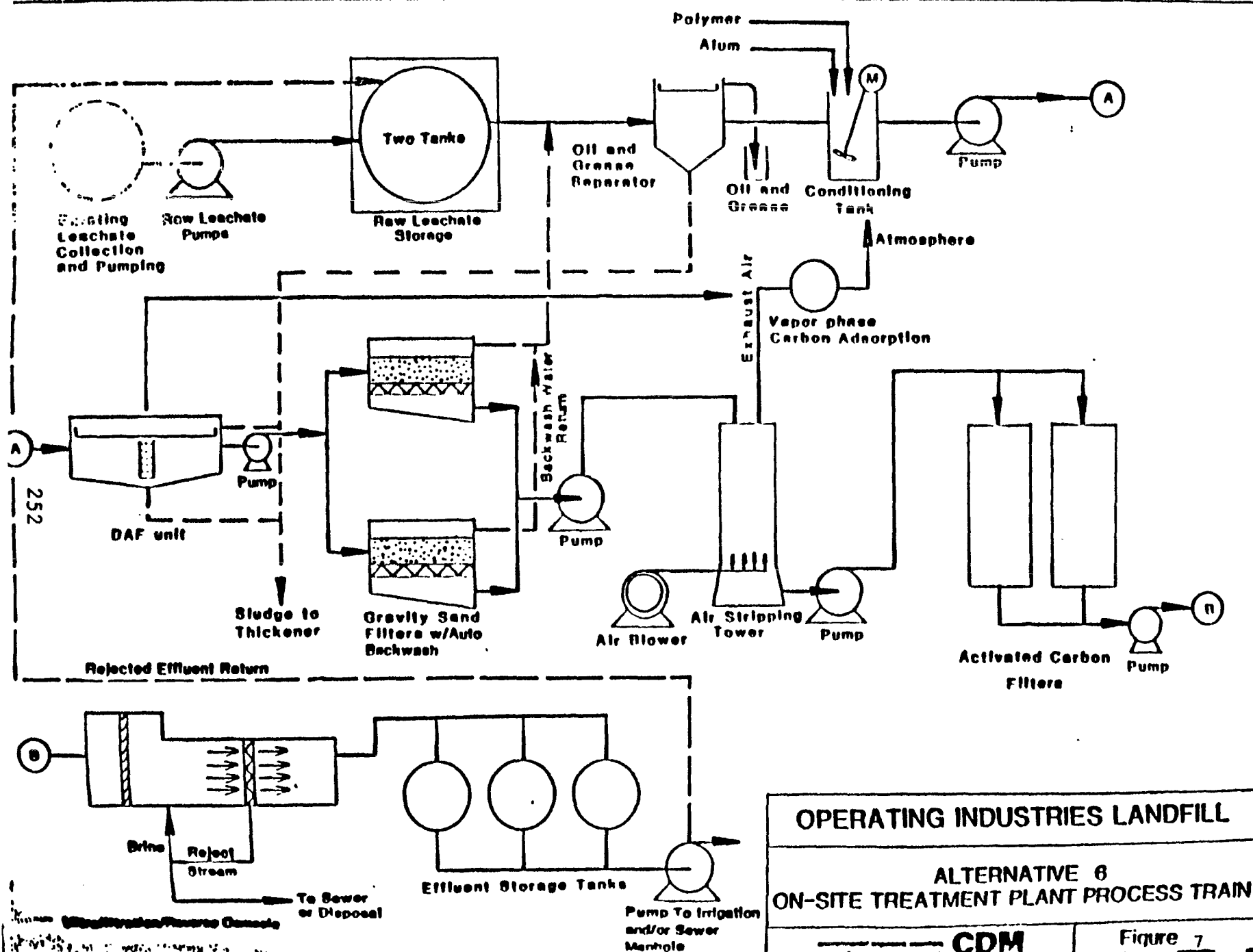
The leachate treatment facilities discussed in previous sections were sized to treat the liquids collected at a rate of approximately 10,000 gallons/day. In order to minimize impacts of plant operations, plant operation is planned for 40 hours per week and would operate on weekdays only during daylight hours. If flow significantly increases, the plant would have the capability of operating up to 24 hours per day. A forty-hour week operating period requires process units capable of treating a flow rate of 30 gallons per minute (gpm). The plant would be capable of efficiently treating leachate in a flow range of 15 to 35 gpm. Thus, the plant will have the flexibility of handling variations in the rate of leachate collection from 7,200 gallons/day to 16,800 gallons/day over an eight-hour workday. For planning purposes and consistency with the final site remedy, flexibility will be incorporated into the plant layout and space requirements. The flexibility will accommodate plant expansion to a 60, to a 90, and/or to a 120 gpm plant. Operation of a 120 gpm plant 24 hours per day defines the maximum design capacity for the facility of 57,600 gallons/day.

Evaluation

Off-site Treatment:

Off-site treatment was judged to be effective for the treatment of OII leachate and is readily implementable but the long-term reliability of this alternative is questionable. The CERCLA off-site disposal policy requires a RCRA inspection of off-site treatment facilities every six months. If significant violations are found at a facility, that facility can no longer be used for treatment of the OII leachate. As a private





enterprise, the off-site treatment facility could cease operation at any time, especially if it becomes unprofitable. Costs of leachate treatment at the facility are set by the company and are obviously out of the control of EPA. If either facility becomes unavailable for treatment in the future, an alternative off-site treatment facility would need to be identified. Off-site treatment might then require excessive haul distances and associated increases in cost and risk. If no alternative facilities are available, construction of an on-site treatment facility would then be required. During design and construction of an on-site treatment facility, on-site storage of significant volumes of leachate may be necessary. Other leachate management options may include treatment off-site in violation of the CERCLA off-site disposal policy or land disposal in potential violation of the Solid Waste Disposal Act.

Off-site treatment could expose the public to the potential risk of direct contact with the leachate in the case of a transportation accident involving spillage. Leachate spillage at points of loading and unloading poses the greatest risk, however the public would not likely be directly exposed to these spills. Residuals, such as oil and grease, sludges and spent carbon are not as rigorously regulated at off-site treatment facilities as they are at Superfund sites. Disposition of these residuals could pose a potential threat to human health and the environment.

Spillage of leachate during transport could result in groundwater contamination or contamination of surface waters such as the Los Angeles River and the Rio Hondo Coastal Basins spreading ground. In addition, off-site treatment was the most costly alternative of those evaluated further. The present worth cost of five years of off-site treatment was estimated at approximately 6.8 million dollars.

On-site Treatment:

The four on-site treatment alternatives which underwent detailed evaluation are all effective in reducing the mobility, toxicity and volume of hazardous constituents in the OII leachate and could be easily adapted to deal with variable leachate characteristics. All the alternatives are commonly used in industry and in leachate treatment. The on-site treatment facilities would be designed to maximize automation and is expected to have low maintenance requirements. The unit processes are standard or pre-packaged units and are readily implementable. All treated effluent would be batch tested prior to discharge to insure effectiveness and reliability of contaminant removal.

All of the on-site treatment alternatives would discharge treated effluent to the LACSD sewerage system. This discharge would be required to meet the discharge requirements of the LACSD.

Any on-site alternative would be in full compliance with all applicable or relevant and appropriate requirements of the Clean Water Act (CWA), and the Resource Conservation and Recovery Act (RCRA). Sewering of effluent from any of the on-site treatment alternatives should have no measurable impact on the receiving Joint Water Pollution Control Plant in Carson, California, or the receiving waters of the Pacific Ocean.

Industrial Wastewater Discharge permits (IWDP) would be required from the local sewerage agency (Monterey Park or Montebello). The City of Monterey Park Sanitary Sewer and Industrial Waste Code requires approval of City Council prior to issuance of an IWDP for discharge of landfill wastes into the city sewer system. Discharge to local sewers in the City of Montebello would require approval from that city.

Comparison of Alternatives

Off-site treatment is more costly than any of the on-site treatment options at a cost of approximately \$6.8 million for 5 years of treatment. It also poses the greatest potential for spillage at points of loading and unloading and during transport. Spillage during transport would pose the potential for direct human contact and environmental contamination. Off-site treatment has the least long-term reliability and the greatest potential for increased future remedial action costs.

The cost of on-site treatment for a five-year period ranged from \$3.8 to \$5.1 million for the range of treatment processes. All on-site treatment alternatives would be constructed to minimize the potential for spillage, and all spillage could be contained within the facility. Leachate would be treated to meet discharge standards, and any air emissions from these alternatives would be controlled with best demonstrated available technologies to protect public health and the environment. Concerns about leachate spillage during transport and long-term reliability would be eliminated by choosing an on-site alternative.

Comparison of On-site Treatment Processes:

Four different treatment processes, Alternatives 2, 3, 5, and 6, underwent detailed evaluation in the FS. Different treatment processes were used to achieve varying degrees of treatment, effectiveness, and efficiency. All four alternatives include oil and grease separation, chemical addition, dissolved air flotation (DAF), and sand filtration as the initial treatment processes. The oil and grease separation removes nonemulsified oil and grease from the leachate. Settleable sludge solids are also removed in this portion of the process. Chemicals are then mixed with the leachate to facilitate removal of emulsified oil and grease and heavy metals. DAF is then used to remove flocculated oil and grease which are skimmed off the top of the flotation tank and heavy metals which are collected as sludges at the bottom. Gravity sand filters are used to capture floc

and other suspended solids not removed by the DAF unit.

Alternative #2:

In alternative #2, air stripping is added to the treatment process. Air stripping is a unit process in which liquid and air are brought into contact to remove volatile substances from the liquids (i.e., volatile organics and sulfides). Several volatile organic compounds, such as vinyl chloride, found in OII leachate have high Henry's Law constants, and thus would be readily removed. However, the presence of a complex matrix of toxic organic substances in the leachate, including less volatile pollutants such as phenols and phthalate esters, could prevent an air stripping system alone from consistently meeting LACSD standards for total toxic organics. For this reason Alternative #2 was not considered as effective as alternatives employing both air stripping and granular activated carbon adsorption.

Alternative #3:

Alternative #3 employs granular activated carbon (GAC) adsorption following the initial treatment process. Activated carbon removes organic contaminants from water by the process of adsorption. Activated carbon may not effectively remove the smaller, polar organic constituents in the leachate, such as methylene chloride and vinyl chloride, due to the existence of a complex organic matrix in the waste and the resulting competitive adsorption effects. Alternative #3 should provide organic removal as required to meet the LACSD total toxic organic effluent discharge limitation of 1.0 mg/l. The use of GAC without an air-stripping unit would increase carbon usage due to higher organic loading and therefore increases cost due to GAC replacement. For these reasons, Alternative #3 was not considered as effective as alternatives employing both air stripping and GAC units.

Alternative #5:

Alternative #5 employs air stripping and GAC adsorption after the initial treatment process. This system provided for improved protection of public health by capturing toxic constituents present in off-gases from the air stripping tower in the vapor phase carbon adsorption column. By utilizing both processes, this alternative is expected to achieve the LACSD discharge requirements for both vinyl chloride and total toxic organics. This alternative should reduce carbon consumption and associated costs.

Alternative #6:

Alternative #6 adds ultra-filtration/reverse osmosis to the Alternative #5 process train. This process would remove total dissolved solids from one portion of the treated leachate and concentrate it in the other portion, creating irrigation quality water for use on site and a waste high TDS brine requiring disposal in the LACSD sewer system. Due to the high concentration of dissolved solids in the OII leachate, approximately 60% waste brine and 40% irrigation quality water would be produced per unit volume of treated leachate processed by the UF/RO unit. Due to the additional design requirements and plant maintenance activities associated with UF/RO and the additional cost of approximately \$500 thousand for 5 yrs of leachate treatment, Alternative #6 was not considered as effective as Alternative #5. Table 2 presents a summary of the detailed evaluation of alternatives.

SITING ANALYSIS OF ON-SITE TREATMENT FACILITY

Description of Alternatives:

In considering the construction of a new treatment plant at the OII landfill site, five potentially feasible locations were identified. The approximate locations and direction and distance to points of sewerage are shown in Figure 8. Location A is on the south parcel on an area south of the existing GSF facility and flare station. Location B is on the parcel north of the Pomona Freeway. Location C is on land owned by Chevron Corporation abutting the eastern boundary of the landfill site in the city of Montebello. Location D is on the top of the landfill. Location E is on Southern California Edison Property adjacent to the western boundary of the south parcel.

It is estimated that a site area of approximately 60,000 ft² would be required to provide the space for a 30 gpm facility with room for expansion to a 120 gpm facility. In estimating the size requirements, the following items were considered:

- Space for unit processes and influent and effluent storage for a 120 gpm facility.
- Space for sludge handling.
- Provision for a clean area for the laboratory and office and the unloading of chemical shipments.
- A decontamination area and an area for equipment wash-down such as trucks leaving the sludge handling area.

The treatment plant processes and unit sizes are the same for all locations and are based upon on-site Treatment

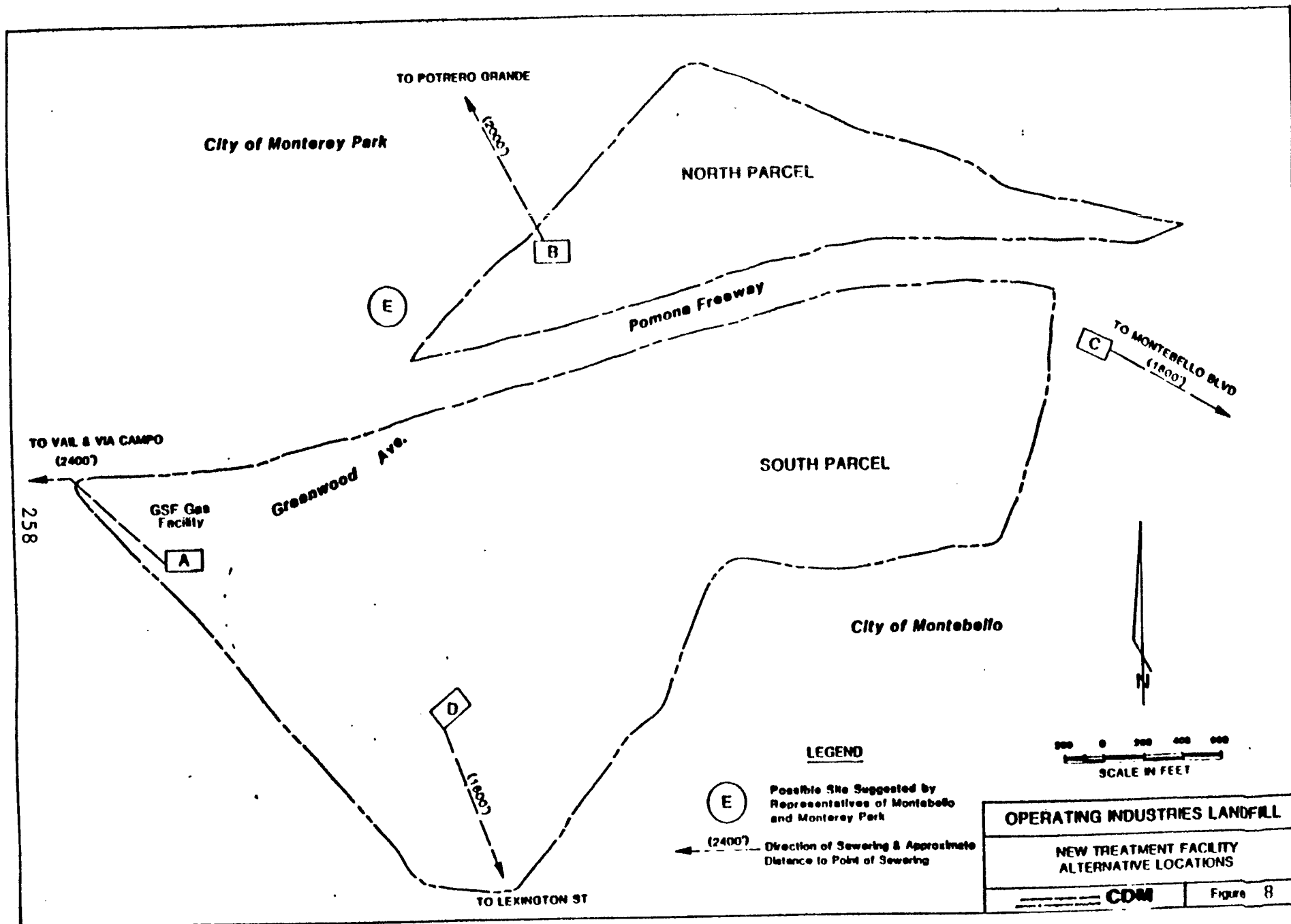
TABLE 2

INTERIM TREATMENT ALTERNATIVE SUMMARY FOR THE OIL LANDFILL SITE

ALTERNATIVE	COST (\$1,000)			PUBLIC HEALTH CONCERNS	ENVIRONMENTAL CONCERNS	INTERFERING CONCERNS	COMMUNITY WELFARE CONCERNS	INSTITUTIONAL CONCERNS
	5 yr	5 yr	30 yr					
NO ACTION	---	---	---	Unacceptable exposure to leachate migrating off-site. Potential health risks due to leachate exposure.	Potential for widespread environmental contamination.	---	Unacceptable	Does not meet goals.
OFF-SITE TREATMENT	30	8,000	22,179	Potential for human exposure due to spillage of leachate during loading, unloading, transport and treatment. Exposure to air emissions.	Potential for surface and groundwater contamination due to spillage during transport.	Reliability	Acceptable	Meets goals if facility operated in compliance. No control over compliance.
ON-SITE TREATMENT								
2) Chemical add., bio-filtration, air stripping	1,901	3,030	9,493	Potential for spills during treatment. However, spills would be fully contained at the facility.	Minimal effects during construction.	May not reduce organics to acceptable level.	Plant location, aesthetic impacts, noise, odors, safety.	May not meet goals. May not receive approval for discharge.
3) Chemical add., bio-filtration, carbon adsorption	1,316	4,792	12,370	Potential for spills during treatment. However, spills would be fully contained at the facility.	Minimal effects during construction.	Less efficient performance without air stripping.	Plant location, aesthetic impacts, noise, odors, safety.	Meets goals.
3) Chemical add., bio-filtration, air stripping, carbon adsorption	1,413	4,345	11,437	Potential for spills during treatment. However, spills would be fully contained at the facility.	Minimal effects during construction.	None	Plant location, aesthetic impacts, noise, odors, safety.	Meets goals.
4) Chemical add., bio-filtration, air stripping, carbon adsorption, R.F.	1,938	5,046	12,340	Potential for spills during treatment. However, spills would be fully contained at the facility.	Minimal effects during construction.	Possible unknown leaching problems. Low permeable recovery rate. Being disposal.	Plant location, aesthetic impacts, noise, odors, safety.	Exceeds goals for some disposal. May have difficulty attaining reuse standards.

--- not applicable

C-2



Alternative #5.

Site Location Considerations:

Location A was originally considered but was eliminated because:

- Site is within 100 feet of residences in the City of Montebello. Residences are concerned with the proximity of this site location. Major concerns are noise, odors, and safety.
- Construction of facility at this location may conflict with space requirements for future remedial actions.
- Site is minimum size needed for current design specifications with no room for expansion.

Location B is considered to be a feasible location for the following reasons:

- Flat site located several thousand feet from residential neighborhoods.
- Facility will require approximately one acre out of the 45-acre North Parcel allowing for further business development by City of Monterey Park on property remaining after the Superfund final remedy is completed.
- Leachate can be piped across the Pomona Freeway in accordance with Caltrans regulations and requirements.
- Site is available space on OII Superfund site and therefore would present no acquisition or access problems.

Location C was ultimately eliminated as a feasible alternative due to the following:

- Would require the acquisition of approximately one acre of land from the Chevron Corporation (not including access road). Location is not located on the OII Superfund site. Acquisition of land and administrative requirements could delay implementation.
- Site would be located 3500' to 4000' from the leachate collection tanks. Leachate line to the plant site would be located close to the yards of numerous residences in the City of Montebello.

- City of Montebello is developing plans to acquire this property from Chevron for light commercial activities.

Location D was considered but was eliminated for the following reasons:

- Site would require a special geotechnical study to determine a suitable location for the unit processes and storage tanks.
- Special design considerations would be required to accomodate anticipated differential settling. The locations and magnitude of settling is not predictable and could cause serious problems in maintaining the integrity of the facility.
- Location may not be compatible with the final remedy for the site. Site could prevent or delay implementation of future remedial actions such as gas control and final closure.
- Overall, siting at Location D would probably delay the implementation of the treatment facility and add costs to the final remedial action process. Uncertainties associated with this location would reduce the reliability of a treatment facility.

Location E was ultimately eliminated as a feasible alternative as:

- Site is located off-site of the OII Superfund site.
- Could result in potential disruption of Southern California Edison power routing.
- Would require acquisition of land from Southern California Edison. Preliminary discussions indicate strong opposition from Edison company.
- Land acquisition and administrative requirements could significantly delay implementation of the remedial action.

SELECTED REMEDY

Description:

EPA's selected remedy for leachate management is on-site treatment using the processes presented in Alternative # 5 of

the Leachate Management Feasibility Study. The on-site treatment facility will be used to treat leachate and other hazardous liquids collected at the OII site during the period before the final remedy for the site is implemented. The facility will be constructed at location B located on the north parcel of the OII site as presented in the Leachate Management Feasibility Study. The treatment facility will be designed to provide the flexibility required to treat varying qualities of leachate and to allow for expansion to treat increased volumes of hazardous liquids. Treatment at the facility could continue after implementation of the final remedy if it is included as part of that remedy.

The on-site treatment would be used during the interim period primarily as part of source control for treatment of leachate and condensate from the site. The plant could also be used for certain RI derived wastes, i.e. decontamination water and hydrogeology pump test water. The plant has the potential to be used for management of contaminant plume migration in the future, if groundwater treatment is required.

The on-site treatment facility will be constructed as a 30 gallon per minute plant with an operating range of 15 to 35 gallons per minute. The treatment plant process units will be mounted on individual concrete pads and configured to allow for plant expansion to 60 gpm, 90 gpm, and/or 120 gpm. The plant will be constructed on approximately 60,000 ft² to accommodate future expansion to 120 gpm. Influent leachate storage of 100,000 gallons will be provided. Treatment plant effluent will be batched for testing prior to discharge to the LACSD sewerage. Appropriate noise and odor abatement features, and landscaping will be incorporated into the design of the treatment plant.

The five-year present worth cost of the selected remedy is \$4.6 million. This represents a capital cost of \$1.6 million and an annual operations and maintenance cost of approximately \$700,000. The selected remedy is the most-effective remedy since it is the least costly alternative which should achieve ARARs.

Target treatment level:

Leachate will be treated to achieve the Los Angeles County Sanitation District (LACSD) Discharge Requirements. Treated effluent will be discharged to the Joint Water Pollution Control Plant in Carson, CA. Table 3 lists the LACSD discharge requirements.

Residuals:

If skimmed oil and grease are determined not to be hazardous, the material will be picked up by a waste oil company. If the skimmings are determined to be hazardous, they will be disposed

TABLE 3
EFFLUENT DISCHARGE LIMITS
FOR
CENTRALIZED HAZARDOUS WASTE TREATMENT FACILITIES
LOS ANGELES COUNTY SANITATION DISTRICT

Parameter ⁽¹⁾	Limitation (mg/l) (maximum for any time)
Arsenic (total)	3.0
Cadmium (total)	0.69
Chromium (total)	2.77
Copper (total)	3.38
Lead (total)	0.69
Mercury (total)	2.0
Nickel (total)	3.98
Silver (total)	0.43
Zinc (total)	2.61
Cyanide (total)	1.20
Sulfides (dissolved)	0.1
Total toxic organics ⁽²⁾	1.0
Oil and grease	10.0
Vinyl Chloride	0.015
Radioactivity ⁽³⁾	

⁽¹⁾ Limitations for other organic parameters and metals will be set as needed.

⁽²⁾ Total toxic organics (a list of 111 compounds specified by LACSD) are to be analyzed using EPA Methods 601 and 602. Additional analysis using EPA Method 625 may be required.

⁽³⁾ In accordance with Title 17, California Administrative Code, Section 30257. Generally limited to 400 pCi/L above natural background.

of at a RCRA facility in compliance with the CERCLA off-site disposal policy.

Once the carbon adsorptive capacity of the GAC units has been fully utilized, the carbon would be disposed of or regenerated. Pick-up of spent carbon and off-site regeneration is a service frequently offered by suppliers of activated carbon and would be used for this project.

Sludge is expected to be produced at a rate of approximately 0.5% by volume of total leachate. If the sludge is determined to be hazardous, it will be disposed of off-site in compliance with the CERCLA offsite disposal policy. Currently, hazardous sludges produced through treatment of CERCLA wastes are hauled to Cherwaste in Arlington, Oregon or USPCI in Murray, Utah. A California facility may be available by the time a treatment plant is constructed.

Air emissions from the facility such as emissions from the DAF unit and the air stripper will be controlled with best demonstrated available technology. Vapor phase carbon adsorption and thermal destruction technologies will be evaluated during the design phase of the project. Emissions from the facility will comply with South Coast Air Quality Management Districts "New Source Review" requirements which require posing a risk of less than 10^{-6} to the community.

The treatment facility is intended to be utilized until implementation of the final remedy for the site or until EPA determines it is no longer needed for the treatment of hazardous liquid from the OII Superfund site at which time the treatment facility would be dismantled. Only hazardous liquid generated from the OII site would be treated at the facility. The facility will be designed so that it can be integrated into the final remedy if continuing treatment of hazardous liquids is required.

Statutory Determinations

Protectiveness:

The treatment facility will be protective of public health and the environment. Leachate will be piped directly to the facility to reduce the risk to public health and environment associated with truck transport of the leachate. Batch testing of treated effluent will insure that discharge requirements are met. Air emissions from the facility will be controlled with best available technologies and will comply with SCAQMD regulations to achieve a risk level of less than 10^{-6} . Residuals from the treatment processes will be regulated under the CERCLA off-site disposal policy. Construction of the facility will

not pose any significant risk to the community or construction workers. Safety features at the facility will be designed to prevent community exposure to leachate spills.

The facility will utilize proven processes and will be reliable for both short- and long-term use. The potential need for replacement of this remedy is very low.
Consistency With Other Laws:

Federal ARARs

EPA intends to comply with federal ARARs for any off-site or on-site treatment or disposal alternative for remedial actions taken at the OII site. The majority of these laws are administered by State or local agencies. Subtitle C of the Solid Waste Disposal Act, entitled the Resource Conservation and Recovery Act (RCRA), would apply to on-site or off-site treatment or disposal facilities.

Regulations for new facilities involved in the treatment, storage, or disposal of hazardous wastes (40 CFR 264), developed from RCRA, are applicable to any new on-site treatment facility or surface impoundment.

The general pretreatment requirements to the Federal Clean Water Act would apply to any alternative which involves the ultimate disposal of collected OII leachate, whether treated untreated, to a publicly-owned treatment works (POTW). Compliance with these standards is enforced by the Los Angeles County Sanitation District (LACSD).

The applicability of the Clean Air Act to an on-site treatment or disposal facility was determined to be applicable. A new source review provision of the act would apply to any new source of emissions and would be enforced by the SCAQMD.

State ARARs

Applicable or relevant and appropriate state requirements as well as local requirements for an on-site or off-site leachate treatment or disposal facilities were identified. It is the intent of the EPA to comply with state ARARs for any on-site or off-site treatment or disposal alternative. These ARARs were based on input from the California Department of Health Services (DOHS), California Waste Management Board (CWMB), Los Angeles County Sanitation Districts (LACSD), South Coast Air Quality Management District (SCAQMD) and the California Regional Water Quality Control Board (CQWCB).

The California Department of Health Services implements the

California RCRA program which would apply to remedial alternatives involving the treatment, storage, or disposal of hazardous wastes. The California RCRA program is very similar to the federal RCRA program. Regulations are codified under Title 22 of the California Administrative Code.

The Los Angeles County Sanitation District (LACSD), along with the local city sewerage agency, regulates discharges to its sanitary sewer system, which serves the area surrounding the OII site. The LACSD sets effluent discharge standards which must be met for liquid waste discharges to their sewer system in order to assure compliance with the Federal Clean Water Act. In order to obtain approval for connection to the off-site sanitary sewerage system from the local sewerage agency (Monterey Park or Montebello) and LACSD, hydraulic capacity must be available and waste treatment capable of consistently meeting discharge limitations must be provided. The LACSD discharge limitations for any treatment facilities are presented in Table 4.

The South Coast Air Quality Management District regulates emissions to the atmosphere. Several specific provisions have been identified which would apply to on-site remedial actions at OII. Rule 402, entitled the nuisance provision, is a general prohibition against excessive emissions which could cause adverse effects including odors. Regulation 13 is a new source review provision which mandates that the net emissions from any new source cannot exceed 75 pounds of organics per day.

Cost-effectiveness and Utilization of Permanent Solutions:

The selected remedy offers the best combination of effectiveness, implementability, and cost in comparison to the other alternatives. This is the least costly alternative which should achieve ARARs. It offers the same or greater, degree of protection and reliability than any of the other alternatives. All treatment process are proven technologies and can be readily implemented. Off-site leachate treatment would continue as part of the Site Control and Monitoring Operable Unit Remedial Action during the construction of the selected remedy.

The selected remedy is cost-effective and utilizes treatment technologies to the maximum extent practicable.

Appendix 1

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21
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APPENDIX B

EPA Record of Decision
Operating Industries, Inc.
Monterey Park, California
Site Control and Monitoring Operable Unit
July 31, 1987

DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION: Operating Industries, Inc., Monterey
Park, California

STATEMENT OF PURPOSE:

This decision document represents the selected remedial action for the Operating Industries, Inc. site developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Contingency Plan (NCP) (40 C.F.R., Part 300).

The State of California has concurred on the selected remedy.

STATEMENT OF BASIS:

This decision is based upon the administrative record (index attached). The attached index identifies the items which comprise the administrative record upon which the selection of a remedial action is based.

DESCRIPTION OF THE SELECTED REMEDY:

Full-time Site Control and Monitoring, Level 1 and 2. This alternative provides for the continuance of site control and monitoring activities at the current level of effort, and allows for future system improvements throughout the project life. The selected remedy represents an operable unit consistent with the final remedial action.

Declarations

The selected remedy is protective of human health and the environment and has been determined to be cost effective and consistent with the final remedial action. As an interim operable unit, the selected remedy will not be required to achieve all applicable or relevant and appropriate requirements (ARAR's). However, the final remedy will address technologies which should be capable of achieving ARAR's for the site. This remedy satisfies the preference for treatment that reduces toxicity, mobility, or volume as a principal element. Finally, it is determined that this remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

7.31.87
Date

John Wise
John Wise
Deputy Regional Administrator
U.S. EPA Region 9

Record of Decision
Concurrence Page

Site: Operating Industries, Inc. Monterey Park, California

The attached Record of Decision package for the Operating Industries site, Monterey Park, California has been reviewed and I concur with the contents.

7/28/87
Date

Steve Anderson
Steve Anderson
Acting Deputy Regional Counsel
Office of Regional Counsel

7/31/87
Date

Jeff Zilman
Jeff Zilman
Acting Director
Toxics & Waste Management Division

7/22/87
Date

Harry Seraydarian
Harry Seraydarian
Director
Water Management Division

7/14/87
Date

David P. Howekamp
David P. Howekamp
Director
Air Management Division

7.28.87
Date

Charles W. Murray, Jr.
Charles W. Murray, Jr.
Assistant Regional Administrator
Office of Policy and Management

DEPARTMENT OF HEALTH SERVICES

107 SOUTH BROADWAY, ROOM 7011
LOS ANGELES, CA 90012
(213) 620-2380



May 8, 1987

Michele Dermer (T-4-2)
U.S. EPA, Region 9
215 Fremont Street
San Francisco, CA 94105

Dear Ms. Dermer:

SITE CONTROL AND MONITORING FEASIBILITY STUDY, OPERATING INDUSTRIES,
INC., LANDFILL SITE

We have reviewed the subject study and agree that alternative No. 3, as presented therein, is the preferred alternative. Alternative No. 3 is more protective of public health and the environment than the other alternatives, and we urge that it be implemented.

Please call me if you wish to further discuss this matter.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Harry N. Sneh'.

Harry N. Sneh
Assessment and Mitigation Unit
Southern California Section
Toxic Substances Control Division

HS:ma

Decision Summary
Operating Industries, Inc.
Monterey Park, California

July 1987
Prepared by Michele S. Dermer
Enforcement Response Section
Superfund Programs Branch
Toxics and Waste Management Division
United States Environmental Protection Agency
215 Fremont Street
San Francisco, California 94105

Decision Summary
Operating Industries, Inc. Site
Monterey Park, California

Site Location and Description

The Operating Industries, Inc. (OII) site is located approximately 10 miles east of Los Angeles in Monterey Park, California (see Figure 1). The OII site consists of a 190 acre landfill which was operated from 1948 to 1984, and was used for disposal of municipal and industrial waste. The landfill contains hazardous waste and hazardous substances, and was listed on the National Priorities List in May, 1986.

The Pomona Freeway divides the site into a 45-acre northern parcel and a 145-acre southern parcel. The top of the south parcel of the landfill is about 150 to 250 feet above the ground surface and the bottom of the landfill is about 200 feet below ground surface. Elevation of the upper surface of the south parcel of the landfill is about 620 to 640 feet above Mean Sea Level (MSL).

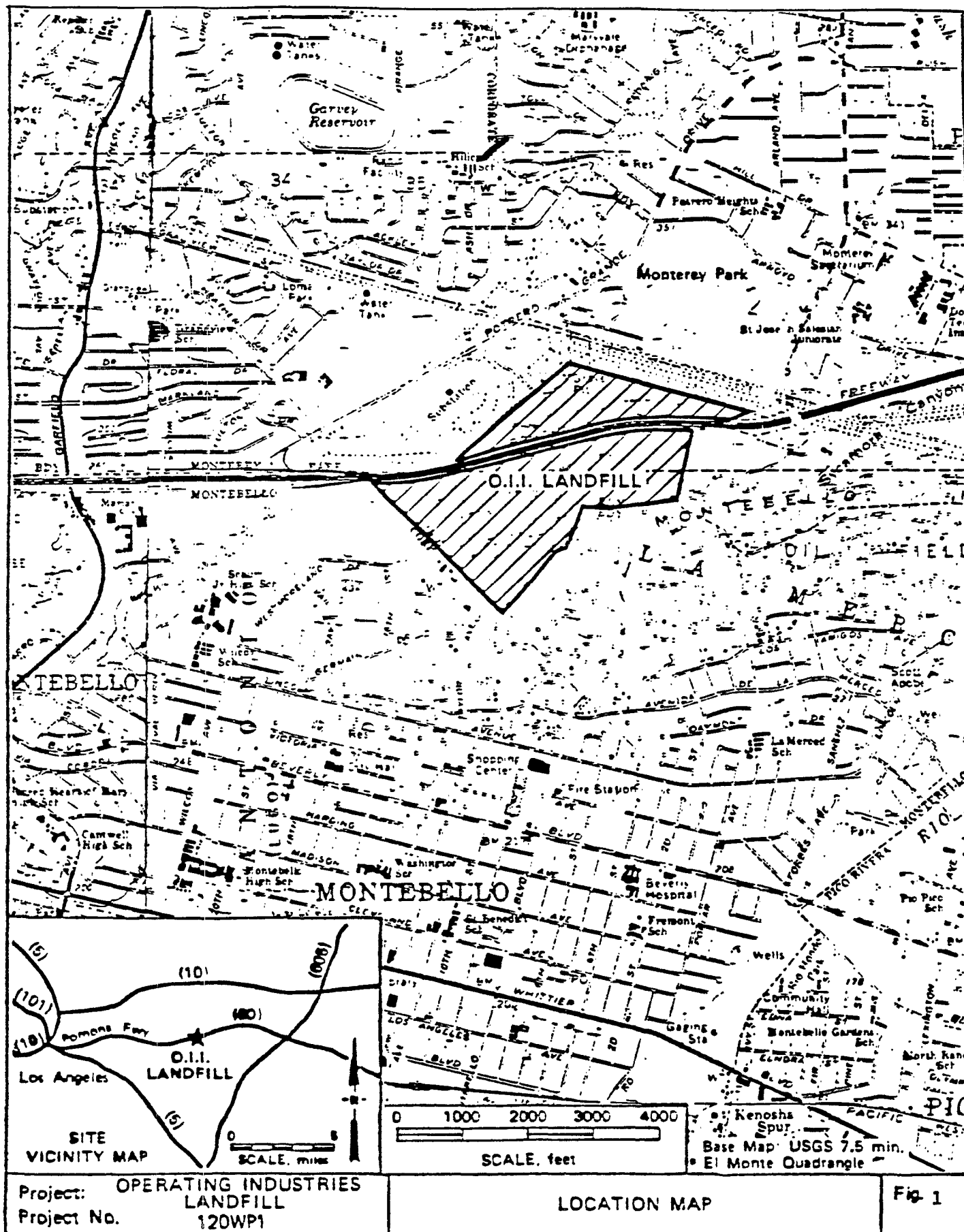
The OII site is presently owned by the former operators, Operating Industries, Inc. The EPA has been conducting site control and monitoring (SCM) activities at the site since OII ceased performing these activities in May, 1986. In addition, EPA has conducted a number of emergency actions to mitigate potential threats to public health and the environment. The site has become more stabilized as a result of the SCM activities and the emergency actions.

The City of Monterey Park has a population of 54,338 (1980 Census). The City of Montebello, which borders the southern parcel of the landfill has a population of 52,929 (1980 Census). Several residents of Montebello are situated in homes immediately adjacent to the boundaries of the landfill. Within a three mile radius of the site, there are approximately 53,000 residences.

The perimeter of the southern parcel of the landfill is fenced. Entrance is restricted and 24-hour security is provided. Several businesses are currently operating on the northern 45-acre parcel. These businesses have a lease arrangement with the operators.

Site History

Landfill operations at the site began in 1948. From 1948 to 1952, the site was used to dispose of municipal garbage by the City of Monterey Park. Prior to 1948, the site and surrounding areas were quarried for sands and gravels. In January 1952, the



site became a privately owned landfill under the ownership of OII. From 1952 to 1984, the site was operated as a landfill for municipal and industrial liquid and solid wastes. In 1974, the Pomoa Freeway was constructed. The freeway split the landfill into a north and south parcel. In June 1975, waste disposal operations were curtailed in the northern parcel. Operations were then limited to the area south of the freeway.

On October 6, 1954, the Regional Water Quality Control Board (RWQCB) first permitted disposal of liquids at OII (Monterey Disposal Company Dump at that time). Some of these liquids, and some liquid industrial wastes disposed prior to the Board's permit, are considered to be hazardous by current Federal and State statutes and regulations. In 1975, a 32-acre area in the western part of the southern parcel was established as the area of liquid waste disposal and permitted to accept Class II-1 wastes. Waste disposal operations ceased in October 1984.

The OII site was placed on the California Hazardous Waste Priority List in January 1984. The OII site was proposed for the Federal National Priority List (NPL) of uncontrolled hazardous waste sites in October 1984 and was finalized on the NPL in May 1986.

In 1974, Getty Synthetic Fuels, Inc. (GSF) entered into a contractual relationship with OII for the extraction of gas from the landfill for processing and sale to Southern California Gas Company. GSF's gas extraction system went into operation in 1979. In March, 1986, GSF ceased its gas processing activities and applied to the South Coast Air Quality Management District (SCAQMD) for a permit to construct an electrical generating plant. At that time, GSF began to flare the extracted gas in an incinerator until final permits for construction of the electrification plant were issued. GSF also applied for a permit from the City of Monterey Park for discharge of treated effluent to the sewer. In January, 1986 the City of Monterey Park denied GSF's permit. As a result, GSF decided to abandon their extraction operations at the OII landfill as of March 1, 1987. EPA took over operation of the GSF system in June, 1987.

Over its 36-year life span, the OII landfill has accepted the following types of wastes: Residential and commercial refuse; water-insoluble, nondecomposable inert solids; liquid wastes; various hazardous wastes including wastewater treatment sludge from production of chrome oxide green pigment; and slop oil emulsion solids and tank bottom sludges (lead) from petroleum refining operations.

Both landfill gas and leachate are generated by the OII site. From April 1983 to October 1984, about 25,000 gallons of leachate per day was collected by OII's leachate collection system and disposed of by mixing with the incoming solid waste. Since then, collected leachate has been stored on-site in Baker tanks, and transported to a permitted off-site treatment facility.

The leachate generated at the OII site is a hazardous waste as defined by RCRA 261.3 regulations, and contains hazardous organic constituents, such as vinyl chloride, trichloroethylene, benzene and toluene.

Land uses around the landfill began to undergo significant changes in 1974. These changes included construction of the Pomona Freeway (1974), and increased residential development within Montebello City limits to the southwest (1975) and south (1976) of the facility. A residential area is directly adjacent to portions of the southern and western boundaries of the landfill.

Discussion of Past Site Control and Monitoring Activities

A number of site problems have been identified by State and Federal regulatory agencies. These include:

- Hazardous leachate seepage and breakthrough on the landfill slopes.
- Subsurface and off-site migration of leachate.
- High landfill gas (methane) levels exceeding the lower explosive limit in nearby residential areas.
- Vinyl chloride present in ambient air emissions and in subsurface gas on-site and off-site.
- Underground fires and associated subsidence on-site.
- Slope instability and erosion problems.
- Surface runoff from the elevated fill area.
- Groundwater contamination from leachate and migrating landfill gas.
- Noxious and offensive odors on- and off-site.

Partial control measure performed on-site by the owner in prior years include:

- Installation of a leachate collection system.
- Development of an air-dike air injection system on the west side of the site to control subsurface gas migration.
- Installation of gas extraction wells around the perimeter (except for the air-dike area) of the site and a gas flaring station.
- Site contouring, slope terracing, and vegetation.
- Covering refuse with additional fill.

The partial control measures instituted by the owner were insufficient to maintain site integrity and the EPA, therefore, instituted emergency response actions in order to protect public health, welfare and the environment. Emergency actions performed to date by EPA include:

- Slope stability and erosion control improvements, including construction of a toe buttress.
- Surface runoff and drainage improvements.
- Rehabilitation of the main flare station.
- Site security.
- Placement of vented water meter box covers off-site.

The owner/operator's ability to control the environmental problems and maintain the control systems began to diminish significantly in late 1984 when it notified EPA and the California Department of Health Services (DOHS) that it could no longer afford to truck leachate offsite for treatment. EPA conducted the leachate trucking and treatment for several months, and then DOHS assumed responsibility for this activity, while OII continued to attempt to operate and maintain remaining on-site control systems. On May 19, 1986, OII notified the State that they intended to discontinue all site control and monitoring activities on the site except irrigation. The EPA therefore assumed these activities on May 20, 1986. SCM activities then continued to be performed by EPA, with the State DOHS providing leachate trucking and treatment, and OII providing on-site irrigation. On December 15, 1986, the State transferred responsibility for leachate trucking and treatment to the EPA. The EPA has also requested that OII allow EPA to assume full responsibility for irrigation of the site, since EPA believes that OII has not properly conducted the activity.

Current Status of Site Control and Monitoring (SCM) Systems

There are seven major environmental control systems and activities at the OII site that require operation, maintenance, inspection, and monitoring on a continuous basis:

1. Gas Extraction and Air Dike System
2. Leachate Collection System
3. Irrigation System
4. Access Road System
5. Stormwater Drainage System
6. Site Security
7. Slope Repair and Erosion Control

Each of these systems and their components are discussed in the following paragraphs. Recent SCM activities and system improvements are also presented in the discussion of each system.

GAS EXTRACTION SYSTEM

Landfill gas is extracted by two separate systems, one installed by GSF and one by OII. The GSF gas collection system is located on the top of the landfill and extracts gas from the center of the landfill. This system consists of a network of piping for conveyance of gas, a matrix of 57 gas wells, and a series of seven surface collectors. The GSF system was designed to extract gas for commercial purposes and was operated by GSF (independent of the OII gas control systems), until June, 1987.

EPA took over operation of the GSF system in early June, 1987, with GSF providing short-term technical assistance. The GSF system must now be operated, maintained, inspected and monitored as part of the routine SCM activities, until the Gas Control remedy for the site is designed and implemented.

The OII gas extraction system (Figure 2) consists of 82 wells located along the perimeter and southern rim of the landfill varying in depth from 30 to 170 feet. Some of the deeper wells go into native soil. The wells are constructed of polyvinyl chloride (PVC) schedule 40 pipe, perforated at the depth of extraction (about 15 to 25 feet below surface grade for shallow wells, and 110 to 150 feet for deep wells). The wells are connected to a PVC pipeline just below the surface, and the gas is drawn under vacuum to the main flare station where it is incinerated. Vacuum is produced by three blowers located at the flare station.

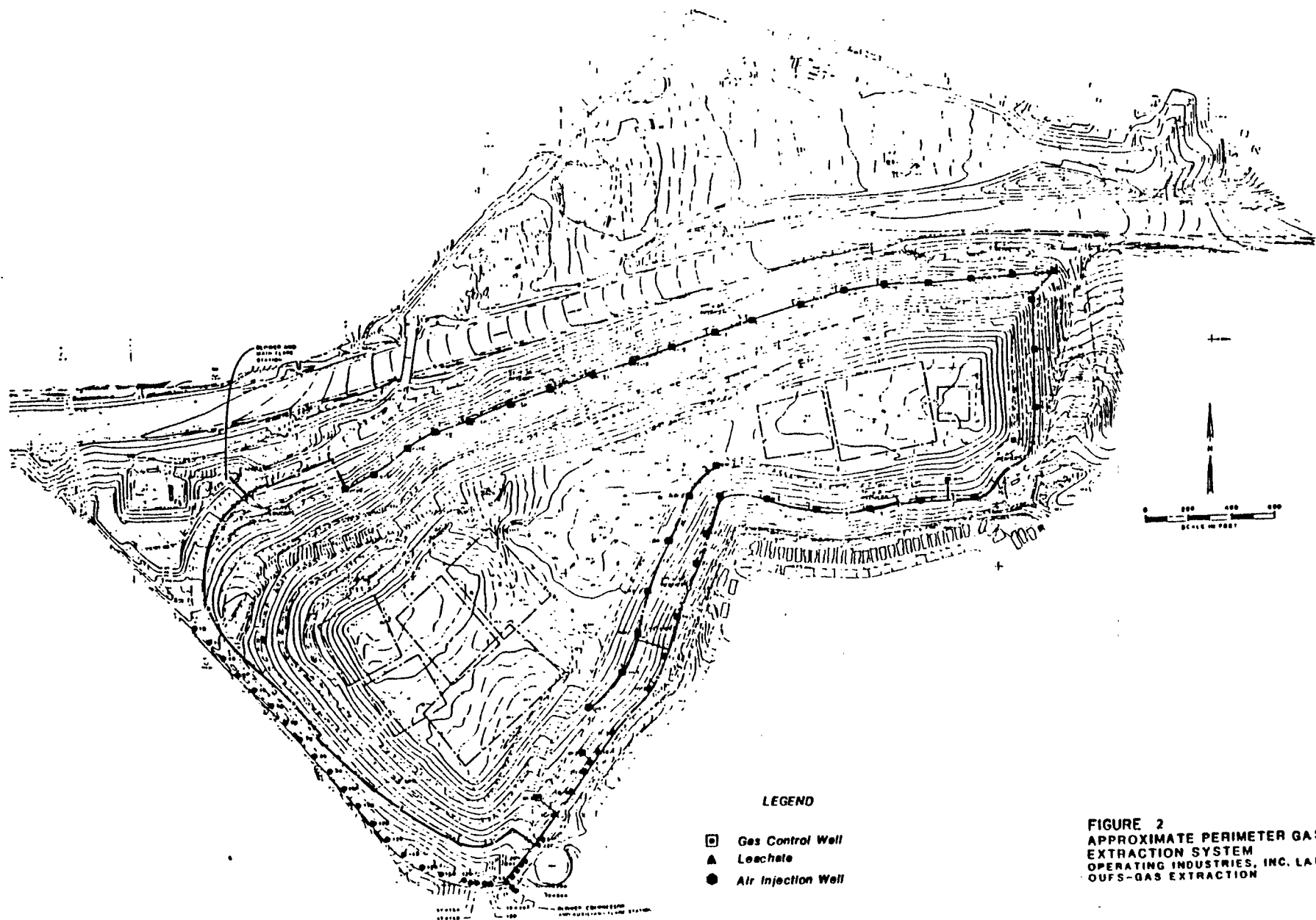


FIGURE 2
APPROXIMATE PERIMETER GAS
EXTRACTION SYSTEM
OPERATING INDUSTRIES, INC. LANDFILL
OUFGS-GAS EXTRACTION

The OII main flare station is located on the northwest corner of the landfill adjacent to the GSF gas facility. The flare station is enclosed by a security fence and consists of three flare stacks, blowers, flame arrestors, electric motors and instrumentation for control, recording, and monitoring. The blowers at the flare station draw the gas out of the extraction wells and pump the gas to the flare stacks where it is incinerated to reduce surface and subsurface emissions from the site. In addition to the main flare station, an auxiliary flare station with two stacks and blowers is located on the southwest corner of the landfill close to the compressor equipment for the air-dike system. The auxiliary system is operated only when it is desired to gather more than 4500 cubic feet per minute (cfm) of landfill gas from the OII gas collection system, or when needed as a standby to replace units taken out of service at the main flare station. The capacity of the standby system is 1000 cfm.

When OII operated the landfill, continued problems were experienced at the main flare station due to fouling of the mechanical systems by condensate. EPA initiated emergency actions in 1986 to overhaul and repair the main flare station, and to install a demister and condensate collection tank to reduce the amount of liquids carried by the gas into the flare station equipment. During the installation period for this equipment, rehabilitative maintenance was also performed on the flare station equipment. It had been inoperative since March, 1986, during which time the auxiliary station was used. The main flare station resumed operation December 17, 1986.

OII AIR DIKE SYSTEM

The air-dike system consists of 26 air injection wells along approximately 2,000 feet of property line situated at the southwestern and western borders of the landfill (Figure 2). The injected air is intended to form a high pressure air barrier under the ground along the property line, preventing migration of landfill gas off-site. To monitor the performance of the air-dike system, gas probes have been installed midway between each of the injection wells. The injection wells are spaced approximately 100 feet apart and probes are approximately 50 feet from the nearest well (see Figure 3). The probes are 20 feet deep. The goal of the air-dike system is to minimize the amount of landfill gas migration beyond the site boundary. The air-dike system can be adjusted by opening or closing the individual throttling valves at each injection well head. Pressurized air to the injection wells is supplied by the compressor equipment located on the southwest corner of the landfill, at the auxiliary flare.

Additional perimeter probes are located at the perimeter of the landfill to monitor performance of the OII gas extraction system. These probes are numbered and colored. Probe depths are usually 5, 15, 25, 35, and 45 feet. However, exact depth may

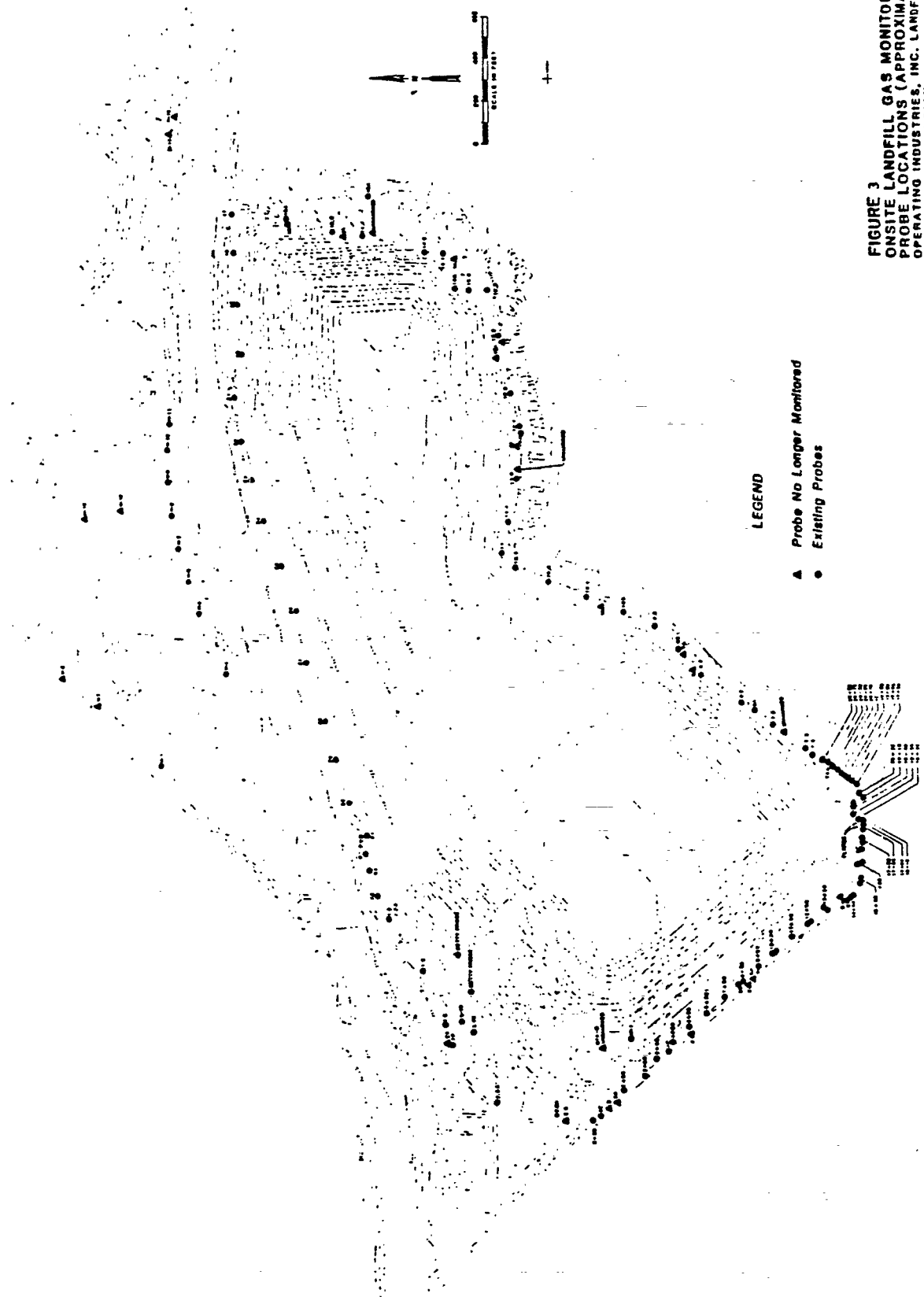


FIGURE 3
 ONSITE LANDFILL GAS MONITORING
 PROBE LOCATIONS (APPROXIMATE)
 OPERATING INDUSTRIES, INC. LANDFILL
 OUGS-GAS EXTRACTION

vary as a result of site-specific conditions.

The locations of air dike wells, monitoring probes, and perimeter probes are all shown on Figure 3. EPA has instituted a daily monitoring program to provide for the most effective operation of the various systems.

Two positive displacement compressors pump water-cooled air to the air-dike injection wells. Operation of the compressor equipment is monitored, recorded, and controlled by automatic instruments.

LEACHATE COLLECTION SYSTEM

Interim actions have been undertaken at the landfill to control and prevent leachate seeps from occurring. A leachate collection system was installed in the early 1980's by OII and subsequently expanded on an as-needed basis in response to on- and off-site surface seepage. Leachate generated from the site is collected by a combination of shallow collection drains and deeper leachate wells. There are five areas on the site in which leachate collection systems are installed. These are shown on Figure 4 and detailed below.

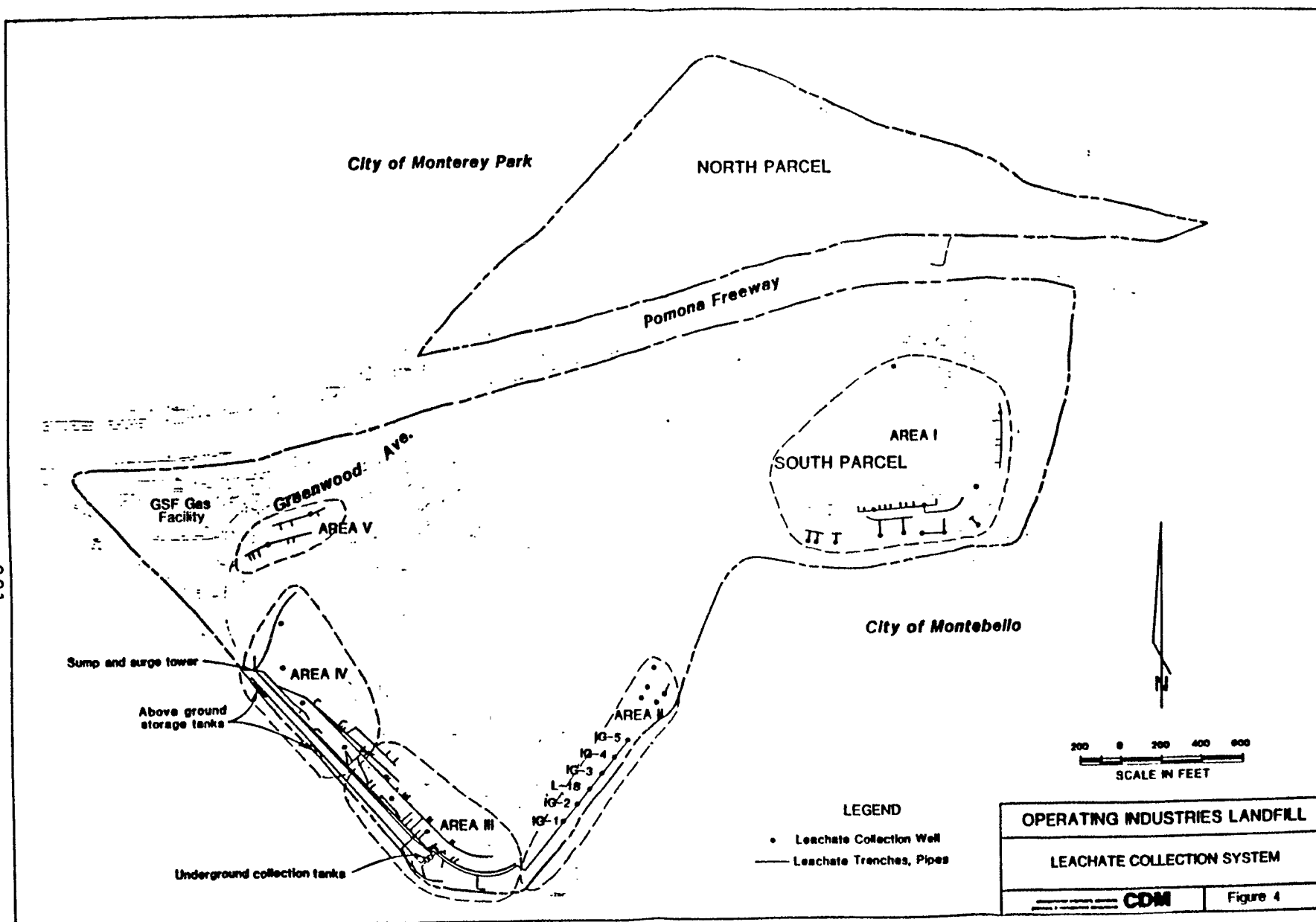
Area I

Area I on the southeast side of the site consists of trenches, perforated pipes and leachate disposal wells drilled into dry refuse. Liquid waste disposal was not permitted on this portion of the landfill. However, there have been leachate seeps. With the installation of the collection system, the seeps have apparently been controlled. Seismic studies of the landfill, performed for EPA by Woodward Clyde Consultants (WCC) indicate the absence of any extensive amounts of liquids in this area.

Immediately south of Area I, along the base of the landfill, a toe buttress has recently been constructed to stabilize the slopes. A continuous drain has been installed within the toe buttress. Leachate collected by this drain is transported to one of three concrete storage tanks which can be periodically pumped out by a vacuum truck.

Area II

The Area II leachate collection system consists of the six Iguala wells. The Iguala wells were installed to prevent leachate seeps in the Iguala Park area south of the OII boundary. The wells are 70 to 80 feet deep, generally extending through approximately 10 to 15 feet of landfill rubbish and into the native earth material. The wells were equipped with electrically powered submersible pumps. Leachate collected from the wells is pumped into a collection manifold pipe connecting the six



wells to the underground tanks in leachate collection Area III. There are five other wells in Area II that are not connected to the collection system. In the past, leachate has been pumped from these wells into vacuum trucks. There is no record of pumping for the past several years.

Two new collection wells were installed in 1986 as part of the emergency response actions for the site. These wells are part of the collection system installed to prevent seeps in the Iguala Park area. The wells are located 50 feet on either side of well #L-18.

Area III

The leachate collection system in Area III, on the southwest corner of the site, consists of a series of buried, perforated pipes and trenches discharging into three buried steel tanks. The buried steel tanks consist of one 3,500 gallon tank which has the upper part of both ends perforated, a 8,000 gallon tank and a 10,000 gallon tank. Each tank can be individually pumped out. The tanks are resting in a gravel bed which can also be pumped to remove leachate collected within the gravel bed surrounding the tanks. The 3,500 gallon tank, with perforations in the upper part of each end, is for collecting leachate in the gravel bed surrounding the cluster of tanks. All three tanks are from old vacuum trucks and do not meet current regulations for underground tanks.

Southwest and down-slope of the buried tanks, along the boundary of OII, is a french drain system which flows to a 36-inch diameter unlined sump. Leachate is pumped from the sump to the buried tanks.

Area IV

Leachate collected in the buried tanks in Area III is pumped to three 20,000 gallon, above-ground storage tanks (Baker tanks) located in the vicinity of the surge tower in Area IV. Leachate is removed from the storage tanks by a vacuum truck and transported off-site for treatment and disposal. During the period from April 1983 through October 1984, the leachate was trucked to and disposed of in the active landfill working area.

The main leachate collection system in Area IV on the westerly side of the site is similar to the system in Area III, consisting of perforated pipe and trenches which feed to an unlined, 36-inch diameter sump in the vicinity of the surge tower. The surge tower serves as a standpipe providing adequate head to gravity flow leachate into the buried tanks in Area III.

Area V

The leachate collection system in Area V is very similar to the system in Area I, consisting of trenches, perforated pipe and leachate disposal wells drilled into dry refuse. It is believed that leachate seeps occurred in this area during the stockpiling of dirt immediately up-slope. The existing system in Area V is apparently controlling surface seeps in this area.

In December 1986, approximately 97,000 gallons of leachate were hauled off-site for treatment and disposal. This represents a daily average generation of approximately 3,125 gallons of leachate. EPA has initiated emergency response actions to repair and improve the existing leachate collection system. These repairs and improvements were necessary to reduce the potential for groundwater contamination from leaking underground tanks, and to improve the effectiveness of the collection system to reduce the potential for off-site migration of leachate. Additional improvements are still necessary to improve the existing collection system.

IRRIGATION SYSTEM

OII attempted to landscape the landfill slopes and to establish a vegetative cover to reduce erosion and to improve aesthetics. A fixed piping and sprinkler system, operated by manually controlled valves, was installed to irrigate the vegetation.

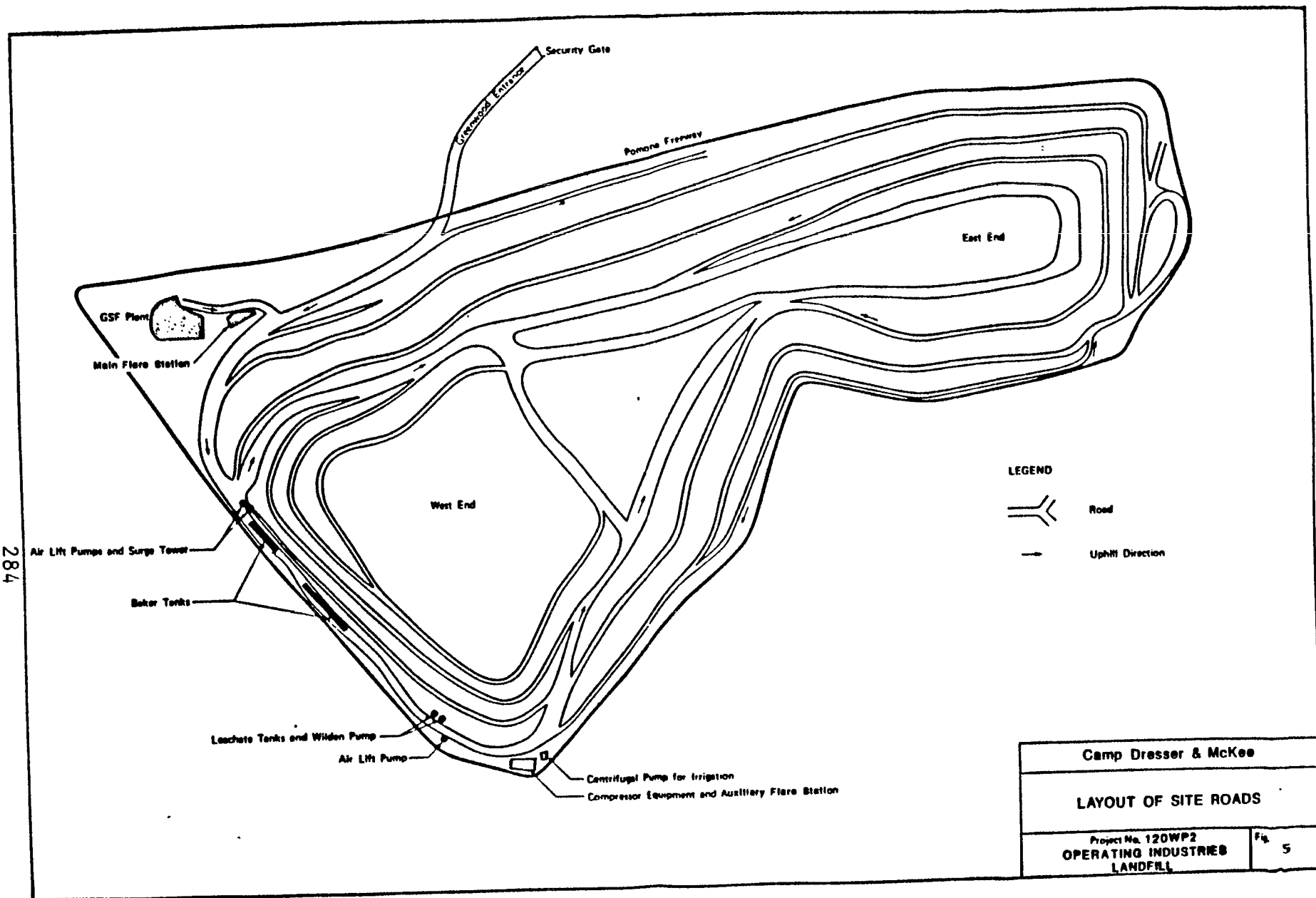
Irrigation on the landfill must be controlled to reduce the potential for adverse effects of the irrigation water, such as increasing the leachate volume, adding moisture to marginally stable slopes, or eroding the surface in areas of very heavy irrigation runoff.

EPA has taken actions to minimize irrigation requirements at the OII landfill. Where slopes were regraded and compacted, one area was revegetated, while the other slope received a soil sealant. The area that was revegetated with indigenous plants will require light irrigation. The toe buttress will also be vegetated with drought resistant plants. Both areas will need regular irrigation.

ACCESS ROAD SYSTEM

Another SCM task is the maintenance of a network of roadways which provides access to all sections of the landfill. The road network is shown on Figure 5. As part of EPA's emergency response actions at OII, landfill roadways were graded in 1986 and concrete ditches installed to improve surface drainage, enhance trafficability, and reduce maintenance effort. All roads on the site are dirt or gravel surfaced. There are no warning or traffic control signs, and no guard rails installed along any of the roadways. Continuous maintenance of roadways is a present and future SCM component.

284



STORMWATER DRAINAGE SYSTEM

The site is split by the Pomona Freeway into north and south parcels. South parcel stormwater outfalls from the north slope via four storm sewer lines henceforth called lines "A", "B", "C", and "D". Line A, a 48- to 60-inch diameter pipe, drains stormwater runoff from the top of the south parcel, and the west portion of the north slope of the landfill, channeling it down the west side of the north slope to a concrete trapezoidal drainageway paralleling the Pomona Freeway. Line B drains runoff from the upper and lower terraces midway along the north slope and also routes it to the freeway channel. Line C, located at the northeast corner of the south parcel, also drains stormwater runoff from the upper and lower terraces and channels it to an off-site gully which leads to an unimproved freeway drainage ditch. Line D is a half-round exposed corrugated pipeline which drains the northeast corner of the landfill. Figure 6 gives the location of these four storm sewer lines.

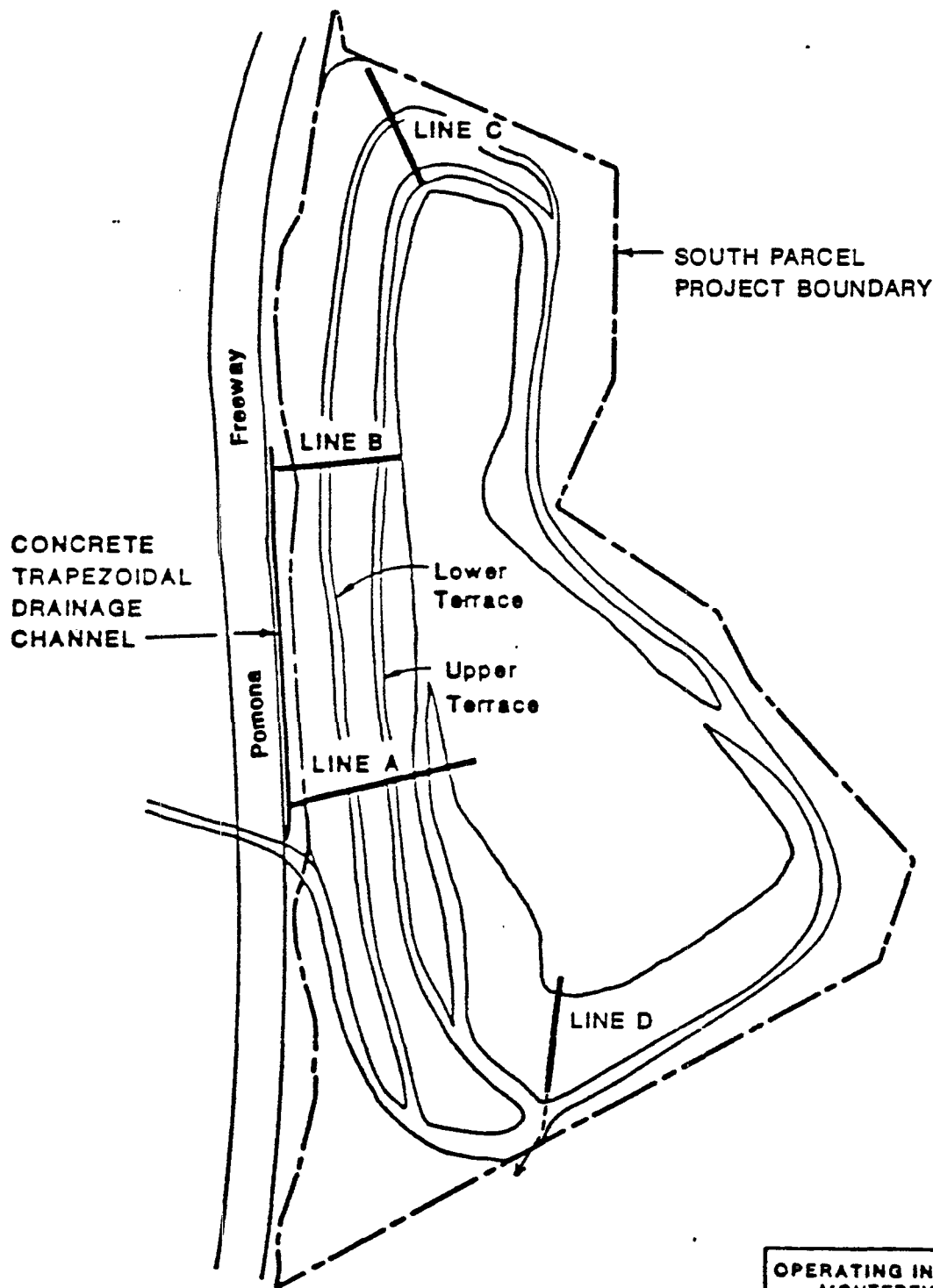
The storm drain lines were designed in 1973 and constructed in 1975 as part of a proposed landfill closure plan. A subsequent lack of maintenance, in combination with a large sediment load and slope creep, had separated the joints and filled catch basins.

EPA completed rehabilitation of the storm drains in 1986, rebuilding Line D, and cleaning, repairing, and replacing the joints on Lines A, B, and C. New catch basins were also installed on these lines. In addition, terrace V-section concrete roadside swales (v-ditches), 6 to 12 inches deep, and located on the uphill side of each terrace, were installed to promote the transport of surface water to the storm drains. Future SCM will require routine inspection of the catch basins and terrace road V-ditches, cleaning any sediment that may accumulate, and repairing significant cracks or other damage.

As a part of a separate study, EPA has also initiated a program to sample and analyze the runoff from the landfill to determine if there are any contaminants in the runoff waters. This data should be available in the summer of 1987.

SITE SECURITY

Access to the south parcel of the site is restricted by a perimeter fence. The gate to the fence is located on the North Parcel and is manned by a security guard. The guard logs the entrance and exit of all site visitors and restricts access to authorized individuals only. The gate is locked at all times when the guard is not present. SCM activities include routine inspection and repair of the perimeter fence and provision of the security guard services.



OPERATING INDUSTRIES, INC. LANDFILL MONTEREY PARK, CALIFORNIA	
STORM DRAIN LINE LOCATION MAP	
CAMP DRESSER & MCKEE INC.	Figure No.
CDM	6

SLOPE REPAIR AND EROSION CONTROL

As part of SCM, the site is regularly inspected by EPA for cracks, fissures, scarps, and similar evidence of subsidence or slope movement. A toe buttress has been constructed by EPA on the southeast side of the landfill to improve slope stability.

In order to reduce surface emissions of landfill gas and infiltration of stormwater, the slopes must be regraded, recompact, and/or recovered when cracks, fissures, scarps, etc. develop on the surface of the slopes.

EPA has conducted emergency actions to repair severely eroded slopes on the north face of the landfill. The slopes were regraded and compacted, and one area was revegetated, while the other slope received a soil sealant. In addition, some landfill slopes have been landscaped by EPA with natural grasses and indigenous plants to inhibit erosion.

SCM activities at the OII landfill will continue to require inspection and monitoring of slopes for evidence of subsidence or movement. Areas that begin to be eroded must be repaired immediately upon discovery to prevent escalation of the problem, which could increase surface emissions or, if severely eroded, expose trash.

ALTERNATIVES EVALUATION

The EPA has been conducting site control and monitoring and emergency response activities at the OII site since OII ceased performing these activities in May 1986. The site has become more stabilized as a result of these emergency actions. As a result of EPA's SCM and emergency response actions, the site SCM activities have shifted from an emergency activity to a more routine control or remedial activity. By conducting SCM, EPA has become very familiar with the conditions at the site and has collected valuable data and information for the overall RI/FS. In addition, SCM activities are necessary for the EPA to formulate and evaluate Site Control and Monitoring alternatives to justify the continuation of SCM as a Remedial rather than an Emergency Action.

On-going control and monitoring of the site is necessary to maintain the site integrity and protect public health and the environment until long-term solutions are designed and implemented.

The following objectives and considerations will guide the formulation of the interim remedial alternatives for site control and monitoring.

- SCM remedial alternatives must be easily and rapidly implementable. The interim alternatives must be consistent with the final solution.
- Remedial actions which permanently reduce the volume, toxicity, or mobility of the contaminants at the OII site are preferred.
- Remedial actions must be cost-effective for the interim (5-year) period. It is estimated that construction for the final remedial actions for the site will begin in 1991.

Long-term remediation will be addressed in the comprehensive RI/FS study currently being conducted. The RI/FS for the OII site is expected to be completed in 1989.

Three levels of screening were performed on the remedial action alternatives. First, an initial technology screening was performed to eliminate inapplicable, infeasible or unreliable technologies. Next, an initial alternative screening was performed. Finally, we performed a detailed alternative evaluation according to the NCP, 40 C.F.R. Part 300.6f(i).

The National Oil and Hazardous Substances Contingency Plan (NCP) 40 C.F.R. 300.68(f) specifies that to the extent it is both possible and appropriate, at least one remedial alternative shall be developed as part of the feasibility study in each of the following categories:

<u>Category</u>	<u>Description</u>
1.	Alternatives for treatment or disposal at an off-site facility:
2.	Alternatives which <u>attain</u> applicable or relevant and appropriate Federal public health or environmental standards;
3.	As appropriate, alternatives that <u>exceed</u> applicable or relevant and appropriate public health or environmental standards;
4.	Alternatives that do not meet applicable or relevant and appropriate public health or environmental standards but will reduce the likelihood of present or future threat from the hazardous substances; and
5.	A no action alternative.

Since this study is for an interim remedy, it is not necessary to develop alternatives that meet or exceed all ARARs. Section 121 of SARA specifically gives a waiver to meeting Federal and State ARARs when the remedy under consideration is an interim remedy. The final remedy developed through the overall RI/FS will address all ARARs, and all the categories for remedial alternatives.

Components of Site Control and Monitoring Activities

Site control and monitoring at the OII site has three components. The first control component is operation, and consists of opening/closing valves, starting motors and other mechanical functions. Maintenance is the second control component, and can be conducted at a baseline level (level 1) consisting of repairs to existing systems such as erosion control and repair of leaks in piping or replacement of small parts in mechanical systems, or it can be performed at a higher level (level 2) to also include preventative maintenance and improvements such as installation of additional gas or leachate wells, road surface improvements, and other system upgrades to improve the operational efficiency of the SCM systems. The third component of SCM is monitoring. Monitoring involves the collection of data, including field measurements of gas wells and probes, the measurement of leachate pumping and collection rates, and the routine inspection of all the environmental control systems on the site. The data collected are used to adjust the systems for maximum control efficiency. The data is also used in the on-going gas control and leachate management operable unit feasibility studies and in the overall RI/FS.

General Response Actions

These three components of SCM were included in the development of general SCM response actions. The array of general SCM response actions which have been identified to comply with the NCP guidance are:

<u>Response Actions</u>	<u>NCP Category</u>
1. Periodic performance of Site Control and Monitoring; and	1, 4
2. Continued SCM with Level 1 Maintenance (repairs and replacements without improvements)	1, 4
3. Continued SCM with Level 2 Maintenance (including repairs, component replacements and improvements)	1, 4
4. No action	5

The first general response action is a reactive mode that provides less than full-time attention to SCM and limited repair upon breakdown of any system. The next two general response actions provide for full-time SCM and take a proactive preventive maintenance posture. The "no action" alternative is considered to provide a baseline against which other actions could be compared.

Description of Alternatives

At present, SCM is required for both active and passive systems at the OII site. Active systems include the perimeter gas extraction air-dike control system, leachate control system and the irrigation system. Passive systems include the stormwater drainage system, access road system, site security system and the slope repair and erosion control systems. The active control systems may have some passive components.

<u>Alternative</u>	<u>Frequency</u>	<u>Description</u>
1.	Periodic	Operations Maintenance - Level 1 Monitoring
2.	Full-Time	Operations Maintenance - Level 1 Monitoring
3.	Full-Time	Operations Maintenance - Level 1 and Level 2 Monitoring
4.	No Action	Cessation of all SCM activities.

Alternative 1 - Periodic SCM

This alternative represents a reduction from the current level of effort applied to site control and monitoring activities. Under this alternative, a full-time SCM capacity would be reduced to periodic inspections and monitoring of gas probes and groundwater wells. Mechanical systems would be turned on and left unattended. System malfunctions discovered during periodic inspections would be repaired (i.e., cracked or leaking pipes, or access road deterioration sufficient to prohibit access) but mechanical systems, would only be repaired or minimally replaced until the further work could be accomplished as part of the permanent site remediation. This alternative could allow site systems to deteriorate to a state of reduced operations depending on the cost necessary to repair or replace a system and, time required to achieve the final remediation. The annual cost of Alternative 1 is estimated at \$2.5 million, which includes approximately \$2 million for offsite trucking and treatment of leachate.

Alternative 2 - Full-Time SCM (Level 1)

This alternative would allow for the continued full-time SCM activities for all site control systems described in Table 1, at Level 1. However, this alternative does not enable improvements to existing control systems, but merely the repair and replacement of existing control systems components to maintain the current condition. This alternative would not address changing conditions at the site. All improvements would be deferred to the permanent remediation of the site as determined by the RI/FS, and any major replacements or systems modifications would be done only as an emergency response action. This could allow conditions to deteriorate to an emergency situation before a response could take place, thereby potentially exposing the community to a hazardous situation. The annual cost of Alternative 2 is estimated at \$3.57 million. This annual cost includes an estimated \$2 million for offsite trucking and treatment of leachate.

Alternative 3 - Full-Time SCM (Level 1 and 2)

This alternative would continue the current level of effort for the site control and monitoring activities of the site in a full-time role, providing daily operation, repairs and replacements of control system components when necessary, and implementing system improvements consistent with the final remedial action as such improvements are identified (Table 2). Replacement parts for the various system needs would be procured and installed on a preventative maintenance schedule. System expansions and/or improvements (such as modifications to the air dike or replacement of underground leachate storage tanks or improvements to access roads and cover) could be implemented if the expansion or improvement was identified as a system need consistent with the final remedial action, or necessary to protect public health, welfare and the environment. Annual cost for Alternative 3 is estimated at \$5.1 million. This annual cost includes as estimated \$2 million for offsite trucking and treatment of leachate.

Alternative 4 - No Action

The no Action Alternative is defined as the cessation of operation and maintenance of site systems. In this scenario, the active gas extraction system would shut down (no electricity to run the blowers applying a vacuum to the system) and gas pressure would continue to build within the landfill, and surface and sub-surface emissions could increase. It is anticipated that odors would quickly rise to an offensive level in the vicinity of the landfill and explosive gas levels could be reached. The passive leachate collection system would continue to collect leachate, and transport it to the underground storage tanks. However, when these tanks reached capacity, they would overflow. Leachate would accumulate in this area and could flow offsite as the soil became saturated. Saturated soils could cause slope failures and mud slides. Irrigation would cease on the landfill site, vegetation would be stressed to the point of survival, and erosion would be unchecked. The access roads would revert to "natural"

Table 1
SITE CONTROL AND MONITORING ACTIVITIES

Operation	Maintenance - Level 1	Maintenance - Level 2	Monitoring
Gas Extraction and Air Dike Control Systems			
<u>Flare Station</u>			
Well head valve adjustment, lighting flares, starting blowers and pumps	Cleaning piping and screens, repair of burners, blowers and condensate return pump	Flare stack extensions new instrumentation for control & recording, silencers with better attenuation and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Monitoring flare temperature, emissions, residence time
<u>Gas Wells</u>			
Adjustment of well pressure and gas velocity	Periodic repair of well laterals and associated piping	Install additional wells and new piping, more monitoring probes and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Monitor well head pressure and gas velocity and temperature, Perimeter and offsite probe monitoring
<u>Air Dike</u>			
Starting compressors and adjustment of injection air pressure and volume	Servicing and repair of compressors and piping	Installation of additional air dike wells and probes and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Daily monitoring of methane gas concentrations and pressure in air dike probes
Leachate Collection and Treatment System			
Starting air lift and electric pumps arranging for trucks to remove leachate.	Servicing and repair of pumps, maintenance of air supply piping, repairs to Baker tanks	Expansion of shallow collection system, installation of leachate collection wells, dewatering of gas wells and probes and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Inspections for emergent seeps, monitor collected leachate volumes, inspect Baker tanks for leaks, measure levels in leachate and gas wells

Table 1 (cont'd)

SITE CONTROL AND MONITORING ACTIVITIES, continued

Operation	Maintenance - Level 1	Maintenance - Level 2	Monitoring
Irrigation System			
Manual opening and closing of valves	Valve and pipe maintenance and repair	Install automated system, purchase rented pipe, expand or reduce system as necessary and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Monitor vegetation stress, inspect pipe for leaks, monitor irrigation volumes used
Access Road System			
Not applicable	Dust control and routine grading	Surfacing improvements, traffic control signs, guardrails and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Routine inspection for signs of erosion or subsidence
Stormwater Drainage System			
Not applicable	Cleaning of ditches, catchbasins and road drainage channels, repair of drainage pipe joints, erosion control at outfalls, surface grading to maintain drainage patterns	Install sediment traps at outfalls, reroute drainage to redistribute stormwater flow, collect and treat contaminated stormwater and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Inspect V-ditches and drainage pipes for damage, monitor rainfall amounts and runoff water quality
Site Security			
Access control by guard	Maintenance and repair of site perimeter fence	Security lights, alarms, increase guard hours and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Ingress & egress roster maintained by guard, inspect perimeter fence
Slope Repair and Erosion Control			
Not applicable	Slope grading and compacting, filling cracks and fissures, maintenance of plants	Improvements to site cover and drainage patterns and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Inspection for signs of erosion and slope movement, field monitoring to determine emissions from surface

conditions, meaning that they could become overgrown with brush, eroded, and generally impassable. Storm drains would continue to passively operate, but sediment buildup or materials blocking drainage to the system would eventually divert drainage to other patterns, and could cause erosion, ponding, and excessive infiltration and run-off of contaminants. In this scenario, all site improvements and the correction of any site deterioration would be deferred to the implementation of the final remediation. Continuing investigations at the site could be hindered or delayed due to access difficulties for drilling, sampling, etc. There is no annual cost associated with Alternative 4.

SUMMARY OF INITIAL SCREENING

Initial screening of interim remedial SCM alternatives was performed to eliminate alternatives which were not effective in adequately protecting the public health, welfare, or the environment, did not follow acceptable engineering practices, established EPA guidelines or did not permanently and significantly reduce the mobility, toxicity or volume of hazardous substances. Alternatives that were deemed significantly more costly than other viable alternatives were also eliminated.

Various SCM alternatives were reviewed. Based upon the previous referenced criteria, only two alternatives were found to be acceptable and were selected to undergo further analysis. The table below presents a summary of the screening process performed on the SCM alternatives for the OII site.

SUMMARY OF INITIAL SCREENING OF SCM ALTERNATIVES

Alternative	Screening Result	Comment
Alternatives 1 and 4	Eliminated	Do not protect public health, welfare, or the environment.
Alternatives 2 and 3	Accepted for consideration	Retained for further analysis.

DETAILED ANALYSIS OF ALTERNATIVES

Description of Alternatives

A. Alternative 2 - Full-Time SCM (Level 1)

Alternative 2 provides for:

- ° Continued SCM of the site systems, including the repair and replacement of system components as necessary for both preventative and emergency maintenance.
- ° SCM activities are limited to the operation and maintenance of systems currently in place and does not provide for improvements to existing systems.
- ° Maintains the existing SCM labor force, the site security, and the capability to optimize performance of existing systems.

A detailed breakdown of costs associated with Alternative 2 is included in Table 2.

B. Alternative 3 - Full-Time SCM (Level 1 and Level 2)

Alternative 3 provides for:

- ° Continuance of the existing SCM labor force to monitor gas probes, manually operate the irrigation system, maintain roadways and provide on-site preventative maintenance to the sites operating systems, plus basic improvements as needed to conduct SCM.
- ° Improvements to the leachate collection system.
- ° Interim cover improvements.
- ° Interim drainage improvements.
- ° Interim improvements to the gas collection/control systems.
- ° Undefined future system improvements throughout the life of the project. Potential improvements identified during the interim period (before implementation of the final remedy) will need to be evaluated to determine if the work should be done as a repair or as an improvement.

Improvements included in this alternative are intended to provide for enhanced operational efficiency, reduced threat to public health, welfare and the environment and improved systems' reliability. An allowance has been provided for annual systems improvements as needs are identified through the RI/FS process. A detailed breakdown of costs associated with Alternative 3 is included in Table 3.

Table 2

ANNUAL COSTS - ALTERNATIVE 2 - FULL TIME SCM (Level 1)

Category	Number	Hours and Rate	Annual Cost
1. LABOR ⁽¹⁾			
Office Staff	2 Reports, Data compilation, records, invoices	400 hrs/mo @ \$50/hr	\$ 240,000
Field Staff, Full-time	1 Supervisor	50 hrs/wk @ \$50/hr	\$ 130,000
	2 Laborers	40 hrs/wk @ \$40/hr	\$ 166,400
	1 Laborer	4 hrs/wk @ \$40/hr	\$ 8,300
	1 Security Guard	50 hrs/wk @ \$10/hr	\$ 26,000
Field Staff, Part-time	1 Laborer	20 hrs/wk @ \$37/hr	\$ 38,400
2. HEAVY EQUIPMENT			
	Graders, loaders, trucks	100 hrs/mo @ \$100/hr	\$ 120,000
3. LEACHATE TRUCKING AND TREATMENT		⁽¹⁾ \$160,000 per mo.	\$1,920,000
4. GSF System ⁽⁴⁾		\$55,000/mo. x 12 mo.	\$ 660,000
5. OVERHEAD			
	Field Office, Phone, Utilities	⁽²⁾ \$ 20,000 PER MO.	\$ 240,000
		TOTAL ANNUAL O&M	\$3,549,100
6. SYSTEM IMPROVEMENTS	(Allowance for)		\$ 0
7. REPLACEMENT PARTS	(Allowance for)	\$ 2,000 per mo.	\$ 24,000
		TOTAL ANNUAL O&M COSTS	\$3,573,100

⁽¹⁾ Based on CA DOHS budgets for Mar 86 through Dec 86, and USEPA estimates for the period Dec 86 to May 87.

⁽²⁾ Includes irrigation water.

⁽³⁾ Rates include direct and indirect labor costs plus 10% fee.

⁽⁴⁾ Based on the following monthly cost estimate:

o Labor:	\$25,000
o Repair/Upgrade:	1,000
o Condensate Treatment/Utilities	24,000
o Contingency	5,000

TABLE 3
ANNUAL COSTS - ALTERNATIVE 3 - FULL TIME SCM (Level 2)

Category	Number	Hours and Rate	Annual Cost
1. LABOR ⁽³⁾			
Office Staff	2 Reports, Data compilation, records, invoices	400 hrs/mo @ \$50/hr	\$ 240,000
Field Staff, Full-time	1 Supervisor	50 hrs/wk @ \$50/hr	\$ 130,000
	2 Laborers	40 hrs/wk @ \$40/hr	\$ 166,400
	1 Laborer	4 hrs/wk @ \$40/hr	\$ 8,300
	1 Security Guard	50 hrs/wk @ \$10/hr	\$ 26,000
Field Staff, Part-time	1 Laborer	20 hrs/wk @ \$37/hr	\$ 38,400
2. HEAVY EQUIPMENT			
Graders, loaders, trucks		100 hrs/mo @ \$100/hr	\$ 120,000
3. LEACHATE TRUCKING AND TREATMENT		⁽¹⁾ \$160,000 per mo.	\$1,920,000
4. GSF System (4)		\$55,000/mo. x 12 mo.	\$ 660,000
5. OVERHEAD			
Field Office, Phone, Utilities		⁽²⁾ \$ 20,000 PER MO.	\$ 240,000
6. SYSTEM IMPROVEMENTS	(See Note A Below)		\$ 250,000
		TOTAL ANNUAL O&M	\$3,549,100
Leachate Improvements		\$250,000	
Interim Drainage Improvements		\$250,000	
Interim Cover Improvements		\$250,000	
Gas Improvements		\$250,000	\$1,000,000
CONTINGENCY For Annual improvements including labor			
REPLACEMENT PARTS	(Allowance for)	\$ 2,000 per mo.	\$ 24,000
		TOTAL ANNUAL O&M COSTS	\$5,073,000

- A. Yearly budget for future improvements over the next four years including additional gas extraction wells, slope and cover improvements, roadwork, flare stack extension, expanding leachate collection system and associated labor costs.
- (1) Based on CA DOHS budgets for Mar 86 through Dec 86, and USEPA estimates for the period Dec 86 to May 87.
- (2) Includes irrigation water.
- (3) Rates include direct and indirect labor costs plus 10% fee.
- (4) Based on the following monthly cost estimate:
- | | |
|----------------------------------|----------|
| o Labor: | \$25,000 |
| o Repair/Upgrade: | 1,000 |
| o Condensate Treatment/Utilities | 24,000 |
| o Contingency | 5,000 |

Evaluation of Alternatives 2 and 3

As an interim measure, both alternatives 2 and 3 are cost effective remedies consistent with the final remedial action, and both provide protection of public health, welfare and the environment. Neither of these alternatives would achieve ARARs for gas emissions. These alternatives are protective of public health by allowing for the most efficient operation of existing systems to minimize the emissions of gas or leachate from the site. Alternative 3 is more protective of public health and the environment because it allows for system improvements as system deficiencies are identified, or as conditions change requiring expansion or improvement of systems at the site.

Both of the alternatives for interim site control and monitoring will contribute significantly to the reduction of mobility, toxicity and volume of hazardous contaminants at the OII site because gas will be collected and incinerated, and leachate will be collected and treated for removal of hazardous constituents. However, site control and monitoring Alternative 3, Full-Time SCM - Level 1 and 2 will further reduce mobility and volume of hazardous contaminants since improvements can be made to extract leachate and gas from additional areas as changing site conditions may require.

The final remedy will address technologies which should be capable of achieving ARARs for the site. However, our understanding of condition at the site is not complete enough to allow us to implement these control technologies at this time.

The annual cost of Alternative 2 is \$3.57 million and the annual cost of Alternative 3 is \$5.1 million. Both these estimates include an estimated cost of \$2 million for offsite trucking and treatment of leachate. Depending on the alternative selected in the Leachate Management Record of Decision, these annual costs could be revised.

An overall summary of the analysis of Alternatives 2 and 3 is detailed in Table 4.

Recommended Alternative

The recommended alternative for site control and monitoring is Alternative 3, Full-Time SCM - Level 1 and 2. Alternative 3 is more protective of public health and the environment than Alternative 2 (Full-Time SCM - Level 1) because it allows for system improvements as deficiencies are identified, or as conditions change which require expansion or improvement of systems at the site.

The annual operating costs of Alternative 3 are approximately \$5.1 million which includes \$250,000 for recommended improvements to the leachate collection system, \$250,000

TABLE #4

SCM ALTERNATIVES FOR OIL LANDFILL

Alternative	Cost (\$1,000)				Public Health Concerns	Environmental Concerns	Technical Concerns ^a	Public Concerns	Permanency ^b
	Annual SCM	Capital	Present Worth 6%	8%					
2. Full-Time SCM (Level 1)	3,573	0	15,043	14,257	Prevents exposure to leachate seeps, controls gas migration, minimizes gas emissions but does not allow for control of emissions due to deficiencies in present systems, or changing site conditions	Reduces air emissions and controls odors and dust	Prevents deterioration of operating systems. Does not address deficiencies of present systems	Moderate Resistance	Reduces mobility and volume of leachate and gas in areas presently addressed by existing systems, but not in areas of future emissions
3. Full-Time SCM (Level 2)	5,073	250	17,148	16,252	Prevents exposure to leachate seeps, controls gas migration, minimizes gas emissions, and addresses system deficiencies and changing site conditions	Reduces air emissions and controls odors and dust	Prevents deterioration and provides for improvements to increase operating systems' efficiency and protect public health	Low Resistance	Reduces mobility and volume

a) These alternatives must maintain site integrity until long term solutions for the site are implemented

b) Section 121 of the Superfund Amendments and Reauthorization Act of 1986

for undefined future system improvements, \$250,000 for interim cover improvements and \$250,000 for interim drainage improvements, and \$250,000 for interim improvements to the gas collection systems.

The recommended alternative is both protective and cost-effective and utilizes permanent solutions and treatment technologies to the maximum extent practicable.

A detailed cost summary for annual cost associated with Alternative 3 is provided in Table 3.

Consistency with Applicable or Relevant and Appropriate Requirements (ARAR's)

SARA contains requirements in Section 121(d) which specify that any "...standard, requirement, criteria, or limitation under any Federal environmental law.." or any "...promulgated standard, requirement, criteria, or limitation under a State environmental or facility siting law that is more stringent than any Federal standard...." is considered legally applicable or relevant and appropriate to the CERCLA action.

The preamble to the NCP defines applicable laws as those which would be legally applicable to the response action, if that action were not taken pursuant to CERCLA. "Relevant and appropriate" requirements are those which, while not strictly applicable, are designed to apply to problems sufficiently similar to those encountered at CERCLA sites. Relevant and appropriate requirements may also be those which would be applicable but for jurisdictional restrictions such as the dates.

SARA also requires that EPA formally set forth ARAR's in the Record of Decision (ROD). However, in the case of an interim remedy or operable unit remedial action, a waiver of this requirements is provided for under Section 121(d). The final remedial action for the OII site will be required to meet all ARAR's.

Federal ARAR's identified for SCM activities include: The Resource Conservation and Recovery Act (RCRA), which contains regulations for facilities involved with the treatment, storage or disposal of hazardous waste (40 C.F.R Part 264) are applicable to the landfills where hazardous waste has been disposed. Additionally, the general pretreatment requirements of the Federal Clean Water Act (40 C.F.R. 403) apply to any action which involves the disposal of treated waste to a publicly owned treatment works (POTW).

Applicable state requirements to be considered include guidance from the South Coast Air Quality Management District

(SCAQMD), the California Waste Management Board, the Los Angeles County Sanitary District (LACSD) and the Regional Water Quality Control Board (RWQCB).

The South Coast Air Quality Management District Rule 1150.1 mandates installation, operation, and maintenance of a landfill gas control system "to prevent the average concentration of total organic compounds over a certain area on the surface of the landfill from exceeding 50 ppm." Further the "maximum concentration of organic compounds as methane, measured at any point on the surface of the landfill, shall not exceed 500 ppm." This requirement would be relevant to the landfill control and monitoring.

The California Waste Management Board regulates landfills in the state. The Board has established a landfill gas migration requirement that the concentration of landfill gases at the perimeter of the landfill shall not exceed 5% methane.

The RWQCB regulates NPDES permits under the Clean Water Act. An NPDES permit may be required for discharges of surface runoff into the Los Angeles County Flood Control System. EPA is conducting sampling of surface water discharges in order to determine whether an NPDES permit is necessary.

The Los Angeles County Sanitary District regulates discharges to their sanitary sewer system, which covers the area surrounding the OII landfill site. LACSD sets effluent discharge limits which must be met for any liquid wastes discharged to their sewer system in compliance with the Federal Clean Water Act. The LACSD will therefore require permits for any discharges of treated or untreated wastes to the sanitary sewer system.

ARAR's identified above are not currently being met by the current level of effort in site control and monitoring. The final remedy will be required to achieve ARAR's. The recommended alternative will lay the foundation for the achievement of ARAR's by allowing for the improvement of existing site systems as deficiencies are identified.

Community Relations

A history of the community relations activities at the OII site, the background on community involvement and concerns, and specific comments on the Feasibility Study and EPA's responses are found in the attached Responsiveness Summary.

Schedule

- ° Approve Interim Remedial Action July, 1987
 Sign Record of Decision.
- ° Commence Interim Remedial Action August 1, 1987

° Complete Interim Remedial Action August 1, 1992

Future Actions

Two additional operable unit Feasibility Studies are currently underway. The Leachate Management Feasibility Study examines alternatives for managing the leachate generated by the landfill. A record of decision for this operable unit is scheduled for the 4th quarter FY'87. The Gas Control Feasibility Study evaluates alternatives for managing the gas generated at the site. A record of decision for this operable unit is scheduled for 3rd quarter FY'88.

The overall RI/FS for the site is ongoing. Field activities under RI Part 2 are currently underway. The final phase RI/FS Part 3 will address the final remedial action and is expected to be completed in 1991. At that time a Record of Decision will be signed to select the final comprehensive remedial action for the site. An expedited clean-up of the northern 45-acre parcel is anticipated before completion of final remedy. It is expected that this northern portion will be deleted from the National Priorities List in advance of the final site cleanup.



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13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

APPENDIX C

OII Landfill
SCM/LMS
Scope of Work

**APPENDIX C
OII LANDFILL
SCM/LMS
SCOPE OF WORK**

August 18, 1988

TABLE OF CONTENTS

	<u>PAGE NO.</u>
LIST OF TABLES/LIST OF FIGURES	v
1.0 INTRODUCTION, INTENT AND OBJECTIVES	1-1
1.1 Introduction	1-1
1.2 Intent	1-2
1.3 SCM Objectives	1-3
1.3.1 Control	1-3
1.3.2 SCM Wastes	1-4
1.3.3 Maintenance	1-4
1.3.4 Monitoring	1-4
1.3.5 Improvements	1-4
1.4 Leachate Management System (LMS) Objectives	1-5
1.4.1 Liquid Collection	1-5
1.4.2 Interim Transport and Offsite Treatment and Disposal	1-6
1.4.3 Pretreatment and Transport Piping	1-6
1.4.4 Influent Storage and Liquid Treatment	1-6
1.4.5 Effluent Storage and Transport	1-6
1.4.6 Other LMS Wastes	1-6
1.4.7 Maintenance and Monitoring	1-7
1.4.8 Improvements	1-7
1.5 Health and Safety Objectives	1-7
1.6 Quality Objectives	1-7
1.7 Management Information System (MIS)	1-7
2.0 BACKGROUND	2-1
2.1 Site History	2-1
2.1.1 Location	2-1
2.2 System Description	2-1
3.0 INTEGRATION AND COMMUNICATION PROCEDURES	3-1
3.1 Introduction	3-1
3.2 Site Activities Requiring Integration	3-1
3.3 Communication and Coordination Procedures	3-2

TABLE OF CONTENTS

(continued)

PAGE NO

4.0 SCOPE OF WORK FOR PRETRANSITION AND TRANSITION ACTIVITIES	4-1
5.0 SCM SCOPE OF WORK	5-1
5.1 Introduction	5-1
5.2 Task S.1 - Gas Management	5-4
5.3 Task S.2 - Stormwater/Erosion Control	5-5
5.4 Task S.3 - Landscaping/Irrigation	5-5
5.5 Task S.4 - Access Roads	5-6
5.6 Task S.5 - Fencing	5-7
5.7 Task S.6 - General Facilities and Utilities	5-7
6.0 LMS SCOPE OF WORK	6-1
6.1 Introduction	6-1
6.2 Task L.1 - Leachate Control, Maintenance, Monitoring and Improvements	6-1
6.3 Task L.2 - Offsite Transport and Treatment	6-3
6.4 Task L.3 - LTS Design, Construction, Startup and Operation	6-4
6.4.1 Task L.3a - Predesign Activities	6-4
6.4.1.1 Task L.3a.1 - Quality and Quantity Characterizations	6-5
6.4.1.2 Task L.3a.2 - Performance Criteria Determination	6-6
6.4.1.3 Task L.3a.3 - Treatability Screening	6-8
6.4.1.4 Task L.3a.4 - Bench/Pilot Testing Plan	6-9
6.4.1.5 Task L.3a.5 - Bench and Pilot Scale Treatability Studies	6-9
6.4.1.6 Task L.3a.6 - Final Process Selection	6-10
6.4.1.7 Task L.3a.7 - Predesign Report Preparation	6-12
6.4.2 Task L.3b - Plant and Facilities Design Activities	6-13
6.4.3 Task L.3c - Procurement and Construction	6-16
6.4.4 Task L.3d - Startup	6-17
6.4.5 Task L.3e - Operations	6-17
6.4.6 Task L.3f - Final LTS Closeout Report	6-17

TABLE OF CONTENTS

(continued)

	<u>PAGE NO</u>
7.0 PRELIMINARY AND PROPOSED SCHEDULES AND PROPOSED BUDGET FOR WORK DEFENDANTS PROPOSED SCOPE OF WORK	7-1
7.1 Introduction	7-1
7.2 Potential Improvement Categories	7-6
7.2.1 Category I Improvements	7-7
7.2.2 Category II Improvements	7-8
7.3 Preliminary and Proposed Schedules	7-8
7.4 Proposed Budget	7-9
8.0 REPORTING AND REVIEW PROCESS (DELIVERABLES)	8-1
8.1 Introduction	8-1
8.2 Project Proposal	8-6
8.3 Type 1 Review Procedures	8-7
8.3.1 Monthly Progress Reports	8-7
8.3.2 Closeout Reports	8-8
8.3.3 Transition Plan	8-8
8.4 Type 2 Review Procedures	8-8
8.4.1 Relatively Simple Designs	8-8
8.4.2 Original Plans	8-9
8.4.3 Annual Revisions to Plans	8-9
8.4.4 Work Completion Report	8-10
8.5 Type 3 and 4 Review Procedures	8-10
8.5.1 Moderately Complex and Complex Designs	8-10
8.6 LTS Design, Construction and Startup	8-11
8.7 Emergency Repairs	8-11
9.0 SCHEDULES	9-1
9.1 Schedule for Items Common to SCM and LMS	9-1
9.1.1 Pretransition and Transition Periods	9-1
9.1.2 Emergency Repairs	9-2
9.1.3 Type 1 Review Procedures (Figure 8.1a)	9-2
9.1.4 Type 2 Review Procedures (Figure 8.1b)	9-2
9.1.5 Type 3 and 4 Review Procedures (Figure 8.1c and 8.1d)	9-4

TABLE OF CONTENTS
(continued)

	<u>PAGE NO.</u>
9.2 LTS Schedule	9-4
9.2.1 Predesign Activities	9-4
9.2.2 LTS Design	9-5
9.2.3 LTS Construction	9-5
9.2.4 LTS Startup	9-5

EXHIBIT I - 1.0 SYSTEM DESCRIPTIONS

LIST OF TABLES

<u>TABLE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
5.1	Preliminary List of SCM Monitoring Activities	5-2
5.2	Summary of Potential SCM Improvements	5-3
7.1	Proposed SCM/LMS Estimated Costs for 5-Year Period	7-5

LIST OF FIGURES

<u>FIGURE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
7.1a	Preliminary and Proposed SCM/LMS Schedules for First Year from Effective Date	7-2
7.1b	Preliminary and Proposed SCM/LMS Schedules for Second Year from Effective Date	7-3
7.2	Example 5-Year SCM/LMS Schedule	7-4
8.1a	Type 1 Review Procedures	8-2
8.1b	Type 2 Review Procedures	8-3
8.1c	Type 3 and Type 4 Review Procedures	8-4
8.1d	Review Procedures for LTS Work	8-5

1.0 INTRODUCTION, INTENT AND OBJECTIVES

1.1 INTRODUCTION

1. This Scope of Work document summarizes the Site Control and Monitoring (SCM) and Leachate Management System (LMS) activities to be undertaken by the Work Defendants in compliance with this Decree.
2. The Work shall be consistent with the decisions set forth in the Records of Decision (RODs) presented in Appendices A and B and performed pursuant to Section IX (Work to be Performed) of this Decree. For purposes of this Scope of Work, the activities from the two RODs are functionally divided into the following two areas:
 - SCM includes control, maintenance, monitoring and improvements of the following elements:
 - Gas Control.
 - Storm Water/Erosion Control.
 - Landscaping/Irrigation.
 - Access Roads.
 - Fences.
 - Support Facilities and Utilities.
 - LMS includes control, maintenance, monitoring and improvements to the following functions:
 - Liquid Collection.
 - Interim Transport and Offsite Treatment and Disposal.
 - Pretreatment and Transport Piping.
 - Influent Storage and Liquid Treatment.
 - Effluent Storage and Transport.

Initially, the liquids shall be hauled offsite for treatment and disposal. A major, planned LMS project will be to design and construct an onsite treatment system to handle all or most of the liquids.

3. The Scope of Work is presented in the following format:
 - The remainder of Chapter 1.0 discusses the intent and objectives for the SCM and LMS activities.
 - Chapter 2.0 provides a brief description of existing site facilities related to the SCM and LMS activities.
 - Chapter 3.0 discusses areas where integration is required between SCM and LMS activities, and with other activities at the site.
 - Chapter 4.0 provides the Scope of Work for Pretransitional and Transitional activities.

- Chapters 5.0 and 6.0 provide the SCM and LMS Scopes of Work, respectively.
 - Chapter 7.0 discusses the Preliminary and Proposed Schedules and Proposed Budget for Work Defendants' Proposed Scope of Work
 - Chapter 8.0 describes deliverables which are required and procedures to be followed for their review.
 - Chapter 9.0 discusses the schedule for initiation.
4. The objectives stated in this chapter indicate that a primary goal of the program shall be to "minimize" certain undesirable factors (e.g., minimize the uncontrolled release of landfill gas) and to "maximize" certain desirable conditions (e.g., maximize flare station efficiency) at the site. The terms minimum and maximum are used in the context of the existing site conditions, and in the context of practical and feasible actions which can be undertaken as part of the focused SCM and LMS functions.
 5. For activities set forth in this Scope of Work, the EPA Superfund Remedial Design and Remedial Action Guidance Document (OSWER Directive 9355.0-4A; dated June 1986), shall be followed as appropriate.

1.2 INTENT

1. It is the Work Defendants' intent that in addition to control, maintenance and monitoring, the SCM and LMS activities include certain upgrades which they believe will accelerate important environmental improvements for the site. These are identified in Table 5.2.
2. The EPA generally agrees with the Work Defendants that there are benefits which may be gained by accomplishing the proposed improvements as early as possible. However, the EPA cannot initially commit to approve specific improvements until: (1) appropriate justification studies have been completed, and (2) there is assurance that basic SCM and LMS activities during the initial five year period will be adequately accomplished with remaining "Work" Escrow Account funds pursuant to Paragraph C of Section IX (Work to be Performed) and Section X (Escrow Account) of the Decree.
3. In order to reflect the Work Defendants' intent and to allow improvement decisions to be made, it is agreed that Project Proposals (Subchapter 8.2) for proposed improvements shall be submitted as early as possible after the effective date. These Project Proposals will include cost-benefit data to allow the EPA and the Work Defendants to establish priorities and

schedules for completing all or a portion of the improvement activities. The actual work for each year will be determined as part of each annual SCM/LMS Master Plan revision (Subchapter 8.2).

1.3 SCM OBJECTIVES

1. This section summarizes objectives for each SCM activity. The topics are discussed in the following sequence:
 - Control.
 - Maintenance.
 - Monitoring.
 - Improvements.
2. The ROD for SCM (Appendix B) states that Applicable or Relevant and Appropriate Requirements (ARARs) identified are not currently being met, and one objective of the SCM activities, including improvements, is to approach or achieve these ARARs. The final remedy is intended to achieve these ARARs.

1.3.1 CONTROL

1. Site control activities shall have the following functional objectives:
 - Gas Control. Minimize the uncontrolled release of landfill gas from the site, and operate gas control systems to prevent or minimize underground fires, to the extent possible given the existing or improved conditions. This shall be accomplished by establishing goals and taking appropriate actions to:
 - Minimize surface gas emissions from the surface of the landfill.
 - Minimize offsite gas migration through subsurface soil.
 - Maximize flare station destructive removal efficiency.
 - Minimize subsurface fires.
 - Stormwater/Erosion Control. Provide effective surface water drainage on the OH site, so that infiltration and erosion are controlled and minimized. This shall be accomplished by establishing goals and taking appropriate actions to:
 - Minimize surface water infiltration.
 - Minimize soil/sediment transport off-site.
 - Minimize erosion.
 - Promptly repair erosion consequences.
 - Landscaping/Irrigation. Irrigate and maintain existing or improved site vegetation to minimize sheet erosion to the extent possible.

- Access Roads. Provide all-weather access to critical parts of the site, maintain critical flow lines and grading plans, and maintain other site roads, as appropriate.
- Fencing. Maintain a perimeter and interior fence which discourages unauthorized access to the site and facilities.
- Support Facilities and Utilities. Provide support facilities and utilities to fulfill the control, maintenance and monitoring activities.

1.3.2 SCM WASTES

1. SCM wastes generated shall be managed pursuant to Section IX (Work to be Performed) of the Decree.

1.3.3 MAINTENANCE

1. Site features, including appurtenances, systems, support facilities, and related necessary offsite systems, facilities, or equipment shall be maintained to the extent required to fulfill the control objectives specified in Subchapter 1.3.1.

1.3.4 MONITORING

1. Monitoring of site features, including appurtenances, systems, support facilities, and related necessary off-site systems, facilities, or equipment shall be conducted as required to fulfill the control objectives specified in Subchapter 1.3.1. Also, monitoring of meteorological and geotechnical instruments shall be conducted as necessary to assist in decisions regarding maintenance actions and the design of improvements and to increase overall knowledge of site conditions. Additional monitoring procedures or equipment may become necessary during the course of the SCM activities. Activities may include monitoring of control parameters or system parameters, inspections of site conditions, and auditing of the SCM activities.

1.3.5 IMPROVEMENTS

1. Improvements are included within the overall scope of the SCM. Decisions regarding potential improvements shall be evaluated based on how well the improvement satisfies the following objectives:
 - Enhance level of site control and/or monitoring.
 - Expand control for a wider range of conditions.
 - Correct control deficiencies.

- Preclude control failures and site deterioration.
- Minimize human health hazards.
- Provide an acceptable level of control at a reduced cost.
- Approach or achieve compliance with Federal, State, or local regulations, requirements, or formal policies.
- Enhance the technical understanding of site conditions.
- Avoid unnecessary conflicts with probable final remedy components.

Because this Decree includes funding limitations pursuant to Section IX (Work to be Performed) of the Decree as described in Subchapter 1.2, specific improvements shall be approved only when it is determined that the cost of that improvement would not eliminate funds required for basic SCM and LMS activities. Subchapter 8.2 describes the information required when an improvement is proposed.

2. The program includes annual updates to the SCM/LMS Master Plan and Operations Manual to reflect existing conditions and the actual work progress. Priorities for improvements shall be reevaluated each year and final decisions shall be made regarding improvement planning for the coming year, as part of the SCM/LMS Master Plan approval process.
3. It is anticipated that the majority of the Work Defendants' recommended improvements will be implemented during the first 3 years. This would allow the improvements to be completed as early as possible, but still allows for annual decisions to be made consistent with the available funds and the monitoring and maintenance history.

1.4 LEACHATE MANAGEMENT SYSTEM (LMS) OBJECTIVES

1. This section summarizes objectives for each LMS activity. The topics are discussed in the following sequence:
 - Liquid Collection.
 - Interim Transport and Offsite Treatment and Disposal.
 - Pretreatment and Transport Piping.
 - Influent Storage and Liquid Treatment.
 - Effluent Storage and Transport.
 - Maintenance and Monitoring.
 - Improvements.

1.4.1 LIQUID COLLECTION

1. Liquid control will minimize migration of leachate from the site to the extent possible with existing leachate management systems. This shall be accomplished by:
 - Minimizing production of leachate.
 - Minimizing leachate migration offsite.

- Maximizing leachate collection system efficiency.
- Preventing onsite and offsite leachate seeps.
- Preventing onsite and offsite contaminated liquid spills.

Other liquid streams (e.g., condensate, decontamination waters) will be minimized without adversely affecting control objectives.

1.4.2 INTERIM TRANSPORT AND OFFSITE TREATMENT AND DISPOSAL

1. Prior to operation of the onsite treatment plant, collected liquids shall be transported to an appropriate, EPA approved, offsite treatment facility. This shall be accomplished by:
 - Providing adequate, temporary, onsite storage.
 - Providing appropriate trucks to transport the liquid in the manner which minimizes the potential for spills
 - Contracting with an approved TSD facility.

1.4.3 PRETREATMENT AND TRANSPORT PIPING

1. Liquids shall be prepared, combined, and transported from the point of origin to the treatment plant storage in the manner which minimizes the overall treatment requirements. This shall be accomplished by:
 - Avoiding the mixture of streams which can impair treatment.
 - The initial removal of constituents by pretreatment, if appropriate for maintaining treatment plant efficiency.
 - Minimizing the potential for uncontrolled transport of liquids to the Leachate Treatment System (LTS) which could upset the system.

1.4.4 INFLUENT STORAGE AND LIQUID TREATMENT

1. Combine and equalize flows and operate the treatment plant so that the amount of liquids from the site are adequately treated, at the lowest cost.

1.4.5 EFFLUENT STORAGE AND TRANSPORT

1. Provide sufficient storage to permit appropriate analyses to be performed prior to discharge to the Publicly Owned Treatment Works (POTW) and/or irrigation system.

1.4.6 OTHER LMS WASTES

1. Other LMS wastes generated will be managed pursuant to Section IX (Work to be Performed) of the Decree.

1.4.7 MAINTENANCE AND MONITORING

1. Site features, including appurtenances, systems, support facilities, and related necessary offsite systems, facilities, or equipment shall be maintained to the extent required to fulfill the control objectives specified in Subchapters 1.4.1 through 1.4.5.
2. Monitoring of site features, including appurtenances, systems, support facilities, and related necessary off-site systems, facilities, or equipment shall be conducted as required to fulfill the control objectives specified in Subchapters 1.4.1 through 1.4.5. Also, monitoring of meteorological and geotechnical instruments will be conducted, as necessary, to assist in decisions regarding maintenance actions and the design of improvements and to increase overall knowledge of site conditions. Additional monitoring procedures or equipment may become necessary during the course of the LMS activities. Activities may include monitoring of control parameters or system parameters, and inspections of site conditions.

1.4.8 IMPROVEMENTS

1. LMS improvements shall be evaluated and accomplished pursuant to Subchapter 1.3.5 (SCM Improvements).

1.5 HEALTH AND SAFETY OBJECTIVES

1. All site activities shall be developed, planned, and implemented in a manner which is consistent with applicable occupational and public health and safety requirements, as specified in Section XI (Worker Health and Safety Plan) of the Decree, and Chapter 4.0.

1.6 QUALITY OBJECTIVES

1. All site activities shall be developed, planned, and implemented in a manner which provides data of adequate and appropriate quality concerning system operation or site characteristics, as specified in Section XII (Quality Assurance/Quality Control) of the Decree, and Chapter 4.0.

1.7 MANAGEMENT INFORMATION SYSTEM (MIS)

1. In the development and selection of the MIS and associated software, preference shall be given to systems which can be readily transferred to EPA.

2.0 BACKGROUND

2.1 SITE HISTORY

2.1.1 LOCATION

1. The OII Site is located at 900 Potrero Grande Drive in the City of Monterey Park, Los Angeles County, California. The Site encompasses approximately 190 acres, with the Pomona Freeway dividing the Site into a 45 acre northern parcel and a 145 acre southern parcel. The majority of the onsite systems and facilities are located on the southern parcel.

2.2 SYSTEM DESCRIPTION

1. The description of existing site systems is provided in Exhibit I of this Scope of Work. The following systems and facilities are discussed:

I.1 Active Control Systems

I.1.1 Gas Management

I.1.1.1 Interior Gas Extraction System

I.1.1.2 Perimeter Gas Extraction System

I.1.1.3 Air Dike System

I.2 Leachate Collection Systems

I.2.1 Area I Collection

I.2.2 Area II Collection

I.2.3 Area III Collection

I.2.4 Area IV Collection

I.2.5 Area V Collection

I.2.6 Onsite Storage

I.3 Landscaping/Irrigation

I.3.1 OII System

I.3.2 Toe Buttress and Northwest Slope System

I.4 Passive Control Systems

I.4.1 Stormwater/Erosion Control

I.4.2 Site Access and Security

I.4.2.1 Access Roads

I.4.2.2 Perimeter Fencing

I.4.2.3 Gate Security Office

I.4.2.4 Security Lighting

I.4.2.5 Utilities and Support Facilities

I.4.2.6 Entrance Gate

1.5 Monitoring

1.5.1 Probes

1.5.2 Wells

1.5.3 Water Meter Boxes

1.5.4 Meteorological Station

1.5.5 Geotechnical Instrumentation

3.0 INTEGRATION AND COMMUNICATION PROCEDURES

3.1 INTRODUCTION

1. This chapter describes how certain Work Defendant and EPA activities at the site shall be coordinated. These activities include:
 - Leachate management and treatment plant design.
 - Site control and monitoring.
 - Landfill gas control, including the gas control operable unit.
 - Remedial investigations.
 - Feasibility studies.
 - Emergency response activities.
2. Communication between the organizations performing or approving the above activities is critical to integration of the various activities discussed below. The following subchapters describe the activities, the organizations, and the structure for communication.

3.2 SITE ACTIVITIES REQUIRING INTEGRATION

1. Examples of activities potentially requiring integration include:
 - SCM activities which could modify the liquid quantities or qualities (e.g., equipment washdown water, modifications to piping system), or storage which will have a direct and immediate impact on the LMS. Conversely, quality or quantity limitations of the LMS may place constraints on site activities.
 - Hydrogeologic drilling and testing activities can generate waters which may require treatment. Temporary storage may be required to determine if treatment of those liquids is required, and if so, procedures for blending the fluids into the treatment system flow will have to be determined by the plant operation. Periods of blending may require the temporary reduction of leachate collection or hydrogeologic testing activities.
 - Relevant data and experience gained from the SCM and LMS operation must be integrated into the final feasibility study for the site.
 - Activities associated with landfill gas control activities will continue to generate condensate which should be incorporated into the LMS influent stream. Therefore, any significant changes in the gas collection program must be coordinated with the design and operation of the LMS and appropriate SCM activities.
 - To the maximum extent feasible, existing flare stations may be used to incinerate LMS off-gas.
 - The use of treatment plant effluent for the irrigation system.
 - Irrigation activities currently conducted by Operating Industries, Inc.

3.3 COMMUNICATION AND COORDINATION PROCEDURES

1. As described in the Decree, the Work Defendants, EPA, and DHS shall each designate a Project Coordinator as the focal point for formal communications. In addition, the following communications procedures shall be used to assure integration of site activities:
 - Periodic technical exchange meetings.
 - Mutual review process for proposed activity changes.
 - Notification procedures for any onsite activities or events, including spills or upsets, which may affect the Work.
2. Periodic technical exchange meetings shall be conducted between Work Defendants and EPA (and others, as appropriate,) working at the site. Discussion topics may include their current activities and forthcoming plans regarding activities that could have impacts on other entities performing work at the site.
3. To assist in the approval of project deliverables and to assure integration of site activities, the periodic technical exchange meetings shall be a forum allowing the participants to present status reports and interim conclusions and to receive comments, thus building a technical consensus early on. This may include exchange of data and reports.
4. The periodic technical exchange meeting participants shall agree on notification procedures for upsets or short term instances which may have an effect on each other's activities. As appropriate, these procedures shall be integrated with overall site emergency procedures.
5. Sometimes it shall be necessary to include other organizations, including state or local agencies, at a technical exchange meeting. Invitations to attend shall be coordinated through the Project Coordinators.
6. Pursuant to the applicable health and safety plans, tours of the site by interested agency, industrial, or public groups shall be arranged through the Project Coordinators.

4.0 SCOPE OF WORK FOR PRETRANSITION AND TRANSITION ACTIVITIES

1. This chapter presents the Scope of Work for the following activities which are common to both the SCM and LMS programs.
 - Task T.1 - Transition Plan.
 - Task T.2 - Interim Budget and Operations Plan.
 - Task T.3 - Safety, Health and Emergency Response Plan.
 - Task T.4 - Quality Assurance/Quality Control (QA/QC) Plan.
 - Task T.5 - Transition Activities.
 - Task T.6 - Project Proposal Plan
 - Task T.7 - SCM/LMS Master Plan.
 - Task T.8 - Operations Manual.
2. The Transition Plan must be approved before the transition period begins. Tasks T.2 to T.4 must be completed before the Work Defendants assume field responsibilities. Tasks T.6 to T.8 shall be completed according to the schedule set forth in Chapter 9.0.
3. The preliminary and detailed budget estimates shall be developed on the basis of standard engineering cost estimating practices. For the purposes of this Scope of Work, the preliminary and detailed budget estimates shall have goals of ± 25 and ± 15 percent, respectively, of actual costs.
4. Task T.1 - Transition Plan - This plan shall specify the procedures and required activities for the Work Defendants to begin formal field transition activities with EPA. The plan shall include at least the following elements:
 - Onsite Facilities Plan, including locations, utility hook-ups and procedures for integrating with existing facilities.
 - Personnel and facilities mobilization logistics and schedule.
 - Training of the Work Defendants' contractor by the EPA contractor as needed for the transition.
 - Staffing approach and breakdown by discipline and organizational responsibility matrix.
 - Reduced personnel plan for a period exceeding 8 weeks, if appropriate.

During the transition period, the EPA's Contractor shall maintain responsibility for field activities. Work Defendants shall comply with applicable existing health and safety plans.

5. Task T.2 - Interim Budget and Operations Plan - This plan shall be used for both SCM and LMS activities until the SCM/LMS Master Plan and Operations Manual are approved. The plan shall include at least the following elements:
- A statement of the control, maintenance and monitoring activities to be undertaken at the site, including schedules for each.
 - Specific reference to portions of the EPA Operations Manual (existing at that time) which will be used.
 - An interim Monthly Progress Report format.
 - Subcontractor Transition Plan, including procedures for offsite hauling and treating of leachate.
 - Management Information Systems (MIS) description and demonstration schedule.
 - An implementation procedure for beginning the MIS program.
 - A budget for a 6 month period, including a reasonable contingency for unknown maintenance or repair activities.
 - An Incident Report format.
 - Communication procedures for routine and emergency issues which arise after the transition period.
6. Task T.3 - Safety, Health and Emergency Response Plan - This plan shall guide health, safety and emergency response procedures for all activities to be conducted by the Work Defendants. As required to suit specific activities, addenda to the general plan shall be provided. The plan shall be developed pursuant to Section XI (Worker Health and Safety Plan) of the Decree. The general plan shall include at least the following basic elements:
- Introduction and Purpose.
 - Applicable Laws and Regulations.
 - Onsite Organization and Coordination.
 - Medical Surveillance Program.
 - Chemicals of Concern.
 - Activities Hazard Analysis.
 - Site Control, Work Zones, and Security Measures.
 - General Safe Work Practices.
 - Training.
 - Personnel Protective Equipment.
 - Onsite Work Plans.
 - Standard Operating Safety Procedures.
 - Communication Procedures.
 - Monitoring Plan (Personnel and Environment).
 - Decontamination Procedures.
 - Community Safety.
 - Emergency Response Plan, including:
 - A Contingency Plan.
 - Identification and responsibilities of an Emergency Coordinator.
 - Procedures for updating and distributing the Plan.
 - Record Keeping.
 - Requirements for Subcontractor and Special Activity Plans.

- Addenda to the Safety, QA/QC, Sampling, Operations Manual, as appropriate.
- A construction schedule indicating significant milestones.
- Value engineering where potential for substantial cost savings exists.

The prefinal design submission shall represent at least the 90 percent design completion level

2. Final designs shall include all of the items in the prefinal design package with changes made, as appropriate, reflecting EPA Comments.

8.4.2 ORIGINAL PLANS

1. Required items to be included in original plans are provided in Chapter 4.0, Scope of Work for Pretransition and Transition Activities. Types of original plans include:
 - Safety, Health and Emergency Response Plan
 - QA/QC Plan
 - Interim Operations and Budget Plan
 - Project Proposal Plan
 - SCM/LMS Plan
 - Operations Manual

8.4.3 ANNUAL REVISIONS TO PLANS

1. Each year the SCM/LMS and Operations Manual will be revised (updated) to reflect:
 - (1) changes which have occurred at the site and (2) plans for the upcoming year. As a part of this process, the Safety and QA/QC plans shall also be revised, if appropriate, to reflect changes which have occurred.
2. Each portion of the plans (see Chapter 4.0) will be reviewed and modified by the Work Defendants to incorporate addenda prepared during the prior year, and to reflect other changes determined to be necessary to make the plans current for conditions at that time.
3. When improvement designs or significant maintenance repairs are made during the year, addendum to the general plans shall be made to direct related field activities for the remainder of the year. Those addenda shall include discussions for each relevant section in the plan. The addenda for each year will be incorporated into the annual revision.

8.4.4 WORK COMPLETION REPORT

1. Prior to the completion of the Work outlined in this Scope of Work, and in accordance with the Decree, the Work Defendants shall submit a Work Completion Report. The report shall contain at least the following items, as appropriate, (with the exception of all data collected or developed during the 3 months prior to completion of the work which shall instead be submitted to EPA in the Monthly Progress Reports):
 - Introduction.
 - Description of all SCM/LMS facilities.
 - Summary of SCM activities currently being performed.
 - List of manuals, plans, reports and current addendum to those documents which are being used for the SCM/LMS activities.
 - List of potential site improvements not yet completed.
 - Manpower allocations and cost summaries for the past 12 months of SCM/LMS activities.
 - SCM/LMS monitoring data summary for the past 12 months.
 - Description of the phase out activities required.
 - Certification that the Work has been completed in accordance and in full compliance, or that Work Defendants have otherwise satisfied their obligations in accordance and in full compliance, with the Decree.
 - If Work Defendants' obligations under the Decree terminate before completion of the Work, this report shall also include a description of and status report on Work activities yet to be completed.

8.5 TYPE 3 AND 4 REVIEW PROCEDURES

8.5.1 MODERATELY COMPLEX AND COMPLEX DESIGNS

1. The Project Proposals shall include the items discussed in Subchapter 8.2.
2. The Prefinal and Final Design Packages requiring Type 3 and Type 4 Review Procedures have the same content requirements as designs requiring Type 2 Review Procedures (Subchapter 8.4.1).
3. The added design steps (Preliminary and/or Intermediate) also require data to be submitted for each of the topics required for the Prefinal Design Package. The level of detail provided should reflect approximately the following levels of design completeness:
 - Preliminary Design: Approximately 30 percent
 - Intermediate Design: Approximately 60 percent

8.6 LTS DESIGN, CONSTRUCTION AND STARTUP

1. Subchapters 6.4.1 through 6.4.3 describe the predesign, design and construction procedures required for the LTS. The types and numbers of design review packages shall be determined based on the recommendations provided with the predesign package.
2. The review procedure is illustrated in Figure 8.1d.

8.7 EMERGENCY REPAIRS

1. Refer to Safety, Health and Emergency Response Plan for immediate actions required.
2. After immediate health and safety concerns have been addressed, Work Defendant Project Coordinator shall develop a proposed plan for further action, if necessary and appropriate, and submit it to EPA for approval. Such plan shall be submitted within 7 days unless otherwise agreed to by EPA after consultation with the Work Defendants. Such plan shall include at least the following items:
 - Schedule for necessary repairs.
 - Identification of any resulting improvement proposals, including type of deliverables required and implementation of schedule.

9.0 SCHEDULES

1. This chapter provides schedules for items required by the Work Defendants as discussed in Chapter 8.0. If EPA determines it is appropriate, the time periods set forth under this schedule may be extended without requiring a formal modification of the Decree. Requests for schedule modifications made by the Work Defendants should include a discussion of the reasons for the request. To the extent appropriate, Work Defendants shall confirm to EPA the calendar date of subsequent deliverables.

9.1 SCHEDULE FOR ITEMS COMMON TO SCM AND LMS

9.1.1 PRETRANSITION AND TRANSITION PERIODS

- Transition Plan
 - Prefinal Plan: 4 weeks after the effective date of the Decree.
 - Final Plan: 2 weeks after receipt of EPA comments.
- Safety, Health and Emergency Response Plan
 - Plan Outline: 4 weeks after effective date of the Decree.
 - Prefinal Plan: 4 weeks after receipt of EPA comments.
 - Final Plan: 1 week after receipt of EPA comments.
- QA/QC Plan
 - Plan Outline: 3 weeks after effective date of the Decree.
 - Prefinal Plan: 4 weeks after receipt of EPA comments.
 - Final Plan: 2 weeks after receipt of EPA comments.
- Interim Budget and Operations Plan
 - Plan Outline: 2 weeks after effective date of the Decree.
 - Prefinal Plan: 5 weeks after receipt of EPA comments.
 - Final Plan: 2 weeks after receipt of EPA comments.
- Transition with EPA Contractor
 - **Begin:** 1 week after Approval of Final Transition Plan.
 - **End (Beginning of Work Defendants control of site):** 1 week after EPA approval of Final Safety, Health, Emergency Response, QA/QC and Interim Budget and Operations Plans. If greater than 8 weeks of Transition Activities occur, a reduced personnel plan shall be established to be in effect until transfer of responsibility occurs.

- **Project Proposal Plan**
 - Prefinal Plan: 6 weeks after effective date of the Decree.
 - Final Plan: 2 weeks after receipt of EPA comments.
- **First Submittal of SCM/LMS Master Plan**
 - Outline: 2 weeks after EPA comments on the Prefinal Project Proposal Plan.
 - Prefinal Plan: 13 weeks after EPA approval of the Final Project Proposal Plan, but not earlier than 6 weeks after receipt of EPA comments on Master Plan Outline.
 - Final Plan: 4 weeks after receipt of EPA comments.
- **Operations Manual**
 - Outline: 2 weeks after EPA comments on the Prefinal Project Proposal Plan.
 - Prefinal Plan: 13 weeks after EPA approval of the Final Project Proposal Plan, but not earlier than 6 weeks after receipt of EPA comments on Master Plan Outline.
 - Final Plan: 4 weeks after receipt of EPA comments.

9.1.2 EMERGENCY REPAIRS

- **Repair Proposal:** EPA Project Coordinator to be notified as early as possible. Schedule of other deliverables shall be agreed to pursuant to Subchapter 8.7.
- **Emergency Repair Closeout Report:** 2 weeks after completion of the repairs.

9.1.3 TYPE 1 REVIEW PROCEDURES (Figure 8.1a)

- **Monthly Progress Reports:** 14th day of each month.
- **Incident or Emergency Response Reports:** Included in Monthly Report.
- **Closeout Draft Report:** 4 weeks after construction completion.
- **Closeout Final Report:** 2 weeks after receipt of EPA comments.

9.1.4 TYPE 2 REVIEW PROCEDURES (Figure 8.1b)

- **Type 2 Designs**
 - **Project Proposal:** Date to be determined.

- Prefinal Design: 4 weeks after receipt of EPA approval of proposal or as agreed to by the EPA Project Coordinator.
- Final Design: 2 weeks after receipt of EPA comments or as agreed to by the EPA Project Coordinator.
- Annual Revisions to the SCM/LMS Master Plan and Operations Manual
 - Proposed Revision: The later of 9 months following EPA approval of prior year's subject approval, or the anniversary date of the Decree effective date.
 - Prefinal Revision: 4 weeks after receipt of EPA comments.
 - Final Revision: 2 weeks after receipt of EPA comments.
- Original Plans: These schedules are included in the Pretransitional and Transitional activities.
- Final Inspections
 - Initial Inspection: At the appropriate construction stage agreed upon with the EPA Project Coordinator.
 - Punch List Conference: By all inspection personnel on the same day the Prefinal Inspection is completed.
 - Prefinal and Final Inspection(s): On the day agreed to by EPA Project Coordinators at the Punch List Conference.
- Work Completion Report
 - Report Outline: 3 months prior to Work completion or termination, or estimated date of termination pursuant to funding limitations of paragraph C of Section IX (Work to be performed) of the Decree.
 - Prefinal Report: 4 weeks after receipt of EPA comments.
 - Final Report: 2 weeks after receipt of EPA comments.

9.1.5 TYPE 3 AND 4 REVIEW PROCEDURES (Figure 8.1c and 8.1d)

- Type 3 Designs
 - Project Proposal: Date to be determined.
 - Preliminary Design: 4 weeks after receipt of EPA approval of proposal or as agreed to by the EPA Project Coordinator.
 - Prefinal Design: 4 weeks after receipt of EPA comments or as agreed to by the EPA Project Coordinator.
 - Final Design: 2 weeks after receipt of EPA comments or as agreed to by the EPA Project Coordinator.
- Type 4 Designs
 - Project Proposal: Date to be determined.
 - Preliminary Design: See Note 1.
 - Intermediate Design: See Note 1.
 - Prefinal Design: See Note 1.
 - Final Design: See Note 1.

Note 1: The Project Proposal for Type 4 Designs shall include the periods required for each design step. The approved Project Proposal shall then specify the length of time allowed between each comment period and the subsequent design submittal.

9.2 LTS SCHEDULE

9.2.1 PREDESIGN ACTIVITIES

- Bench/Pilot Testing Plan
 - Outline: 4 weeks after the effective date of the Decree.
 - Prefinal Final Plan: 2 weeks after the receipt of EPA comments.
 - Final Plan: 2 weeks after receipt of EPA comments.
- Predesign Report
 - Prefinal Report: 22 weeks after date of EPA approval of Bench/Pilot Testing Final Plan.
 - Final Report: 3 weeks after receipt of EPA comments.

9.2.2 LTS DESIGN

- Preliminary Design: 7 weeks after EPA approval of Final Design Report.
- Intermediate Design: 6 weeks after EPA approval of Preliminary Design, or 13 weeks after approval of Final Design Report if a Preliminary Design is not required.
- Prefinal Design: 9 weeks after receipt of EPA comments.
- Final Design: 3 weeks after receipt of EPA comments.

9.2.3 LTS CONSTRUCTION

- Contractor Selection: 8 weeks after EPA approval of Final LTS Design.
- Construction Schedule, Safety and Sampling Plan Addendums and LTS Operations Manual Addendum: Included in the Final LTS Design Package.
- Monthly Progress Reports: Included in SCM/LMS Monthly Progress Report.
- First Completion Inspection: To be agreed on with the EPA Project Coordinator.
- Final Completion Inspection: To be agreed on with the EPA Project Coordinator at the first Inspection Punch List Meeting.

9.2.4 LTS STARTUP

- Pre-Startup Equipment Testing: Schedule included in Final LTS Design Package.
- Startup Activities Begin: As established in approved LTS Startup Section of the SCM/LMS Operations Manual.
- Startup Activities End: As established and approved in LTS Startup and Operations Manual.
- Final LTS Closeout Report: 8 Weeks after end date of Plant Startup Section (6.4.6)

EXHIBIT I

I.0 SYSTEM DESCRIPTIONS

L1 ACTIVE CONTROL SYSTEMS

This category includes components related to the leachate and gas control systems and site irrigation at the Oil site. Some components are integral to both gas and leachate management.

1.1.1 Gas Management. Landfill gas is controlled by 3 active subsystems: The Interior Gas Extraction System, the Perimeter Gas Extraction System, and the Perimeter Airdike System. (Figures L1 and L2)

L1.1.1 Interior Gas Extraction System The interior gas extraction system was installed and operated by Getty Synthetic Fuels, Inc. (GSF) from 1978 to 1986. The gas system was originally designed to recover high quality gas for commercial use. The gas processing plant has been removed and recovered landfill gas is now flared (incinerated). This system extracts landfill gas from the center of the landfill. The system consists of a matrix of vertical extraction wells and horizontal surface collectors, a network of conveyance piping, and a flare station. Figure L1 identifies the location of major system components. The current rate of extraction is approximately 2 to 2.5 mmscfd.

Wellfield. The interior wellfield consists of wells, surface collectors, header lines, and valve vaults.

Wells. There are 60 wells in the interior extraction wellfield located on the top deck of the landfill. Wells are constructed of PVC (tandem and vertical wells) or carbon steel pipe (pile driven wells), and range in depth from 140 to 270 feet.

Surface Collectors. Ten surface collectors also extract gas from the top deck of the landfill. Surface collectors consist of a gas-impermeable membrane placed over a gravel bed and covered with a layer of soil ranging from a few inches to 20 feet in depth. A network of shallow (up to 30 feet deep) wells and horizontal HDPE perforated pipe (trenches) conveys landfill gas from beneath each membrane to a central collector pipe.

Conveyance Components Wells and surface collectors are connected to subsurface HDPE header lines which carry the extracted gas to the flare station. Valves along the header lines allow flow adjustment or total shut-off of various areas of the well field. Barometric traps at various points allow condensate to drain from the lines into the landfill. The depth of the header lines for the interior extraction system is estimated at 30 feet deep. Valves for the header lines are located in 6 vaults on the top deck of the landfill.

Flare Station. The interior flare station compound is located on native soil in the northwest corner of the south parcel. The interior flare station consists of all piping, instrumentation, and equipment downstream of a 22' flange between the high density polyethylene (HDPE) line from the well field and a stainless steel section leading into the condensate knockout tank. The flange is located at the extreme southeast corner of the flare station compound.

Condensate Removal. Landfill gas first passes through a horizontally mounted knockout tank, where condensate is separated from the gas stream. Liquid is automatically pumped from the knockout tank to a 6500 gallon polyethylene storage tank. Operation of the condensate pumps is controlled by tank-level switches. The storage tank is located on a dirt pad encased by a concrete berm. The condensate from the storage tank is removed by vacuum truck, as needed, for transport to an off-site treatment/disposal facility. A condensate blowpot and a basket strainer are also in-line upstream from the blower. The blowpot utilizes tank. Level switch and condensate is automatically transferred into the polyethylene storage tank. A vacuum switch for the basket strainer initiates blower shutdown in the event of an obstruction.

Blower (Compressor). A motor-driven Roots rotary lobe blower provides working pressure (vacuum) for the well field. The blower, motor, and an alarm annunciator panel are mounted on a concrete pad in the southeast corner of the flare station compound. Motor controllers for the compressors are mounted on a rack next to the flare station. Start and stop buttons for the blower, blower oil pump, cooling fan, condensate pumps, and compressor annunciators and alarms are located on a control panel in the same area.

Additional Apparatus. After discharge from the blower, the landfill gas passes through an orifice plate and flame arrestor before entering the incinerator. A 7-day paper chart flow recorder continuously traces static and differential pressure readings at the orifice plate. These readings are used to calculate volumetric flow rates.

Incinerator. The incinerator stack (10' o.d. x 35' high) is located in the northeast corner of the flare station compound. Five burners are located inside the unit, with a fuel gas gun and pilot mounted on the central burner. Propane fuel gas (stored in a tank in the southeast corner of the compound) is designed to preheat the stack before the incineration of landfill gas. Two 3' x 6' air dampers located 180° opposed below the burner throat plate are automatically adjusted to maintain combustion temperature at a selected set point. Also mounted on the stack is an ultraviolet flame scanner, 2 stack thermocouples, and 3" sample ports.

The fuel gas train control pane and oxygen analyzer are mounted on a rack next to the incinerator stack. The panel contains control buttons and annunciators installed in a weatherproof enclosure. The fuel gas train consists of valves and piping that deliver propane to the pilot and preheat gas gun. The oxygen analyzer will shut the incinerator system down if the oxygen concentration reaches an upper limit of 13% by volume.

A strip chart recorder for stack temperature is located in the control panel. Stack temperature is presently kept at 1600° F by setting the temperature controller mounted in the control panel.

Instrumentation. The interior gas extraction system operates continuously as an unmanned plant. Station shutdown can occur from a number of faults initiated by the various system alarms. Plant shutdown events are called out by an autodialer machine located in the office building in the flare station compound. The autodialer can be programmed to call-up to 9 different phone numbers, and will repeat the call-out cycle until the alarm condition is rectified or the machine is physically turned off. The autodialer is on-line whenever the station is operating.

L1.1.2 Perimeter Gas Extraction System. The perimeter gas extraction system was installed by Operating Industries, Inc., and is physically independent of the interior system. The current rate of extraction is approximately 1200 scfm. The perimeter system consists of the wellfield, the main flare station, and the auxiliary flare station, as presented in Figure L1

Wellfield.

Extraction Wells. The perimeter well field consists of a total of 79 wells at 50 locations on the north, south, and east boundaries of the site. Depths range from 20 to 180 feet, with some wells penetrating through the refuse cells into native soils. Wells and laterals are constructed of PVC pipe, with 2 casings installed in some wells.

Conveyance Components. Header lines convey extracted gas to the flare station and are constructed of Class 160 PVC pipe. Lines vary from 6 to 16 inches in diameter, and are generally buried no more than two feet below grade. Water traps at low spots along the header line allow condensate to drain from the piping into the landfill. Valves at all branches and at several intermediate points allow isolation or restriction of flow from various areas of the wellfield.

Main Flare Station. The main flare station is located on a graveled pad on native soil in the northwest portion of the landfill. The flange upstream of the condensate knockout is considered to be the flare station/well field boundary.

Condensate Removal. Landfill gas drawn to the main flare station passes through a vertically mounted mechanical condensate knockout tank immediately upon entering the station. The separated liquid flows by gravity into an underground 500 gallon sump, and is automatically pumped from the sump to the above-ground storage tanks, which also serve as on-site storage for the leachate collection system.

Operation of the condensate removal pumps is controlled by level switches. The pump cycles approximately once every 2 days depending on condensate inflow and dropout. Condensate can also be removed from the sump via a 4" stand pipe next to the pump grate.

Blower (Compressor). After condensate removal, the gas stream enters the steel header section and passes through 1 or more of the 3 Sutobilt rotary positive displacement blowers. The blowers are driven by 100 hp 1800 rpm electric motors. Gas discharged from the blowers passes through vertically mounted chamber-type silencers. Each of the silencer units is equipped with an acoustic enclosure to further reduce blower noise.

Additional Appurtenances. After passing through the silencers, gas flows through an orifice plate and flame arrestors to the flare stacks. The flow recorder operates continuously to record blower discharge flow rate. The recorder paper must be changed every 7 days.

Flares. The main flare station contains 3 flares (9'6" o.d. x 20' high) which are designed to handle a maximum flow of 1500 scfm each. Each flare is equipped with 2 manual louvers, 2 ultraviolet flame scanners, a stack thermocouple, a viewport, and 4 sampling ports.

Stack temperature is not automatically controlled in the perimeter flare system.

Openings at the base of the stacks must be manually covered or uncovered to maintain combustion temperature at the desired level.

Propane for ignition is stored in refillable 5 gallon tanks connected to a distribution manifold at the center of the station.

The main electrical panel in the compound contains the transformer, fuses, and motor control center for the station.

The control panel enclosure is located next to the main electrical panel and contains the stack temperature recorder, flare and condensate pump control switches, and annunciator lights.

Instrumentation. The perimeter gas extraction system operates continuously as an unmanned plant. Flare shutdowns, due to safety alarms or power failures, are annunciated by lights on top of the control panel enclosure. However, there is no automatic dialing system for notifying site management in the event of a shutdown. Visual inspection is necessary to verify proper station operation.

Auxiliary Flare Station. The auxiliary flare station is operated only as a backup to the main station - the 2 are never on line simultaneously.

The auxiliary flare station is located at the southwest corner of the site. The compound, which also contains the Airdike System compressors (described in **Compressor Station**), is constructed on refuse fill and is experiencing differential settlement.

The auxiliary flare station is linked to the perimeter system header lines, and consists of 2 centrifugal type blowers and 2 flare stacks. Piping is Schedule 40 PVC throughout. As at the main station, gas passes through flame arrestors and is then incinerated. The flare stacks themselves are generally corroded and in poor condition. Each flare is designed for a maximum of 500 scfm flow. Flare stacks include an ultraviolet flame scanner and thermocouple. Stack pilots are fueled with propane. Stack temperatures are continuously recorded, but flow is not. There is no condensate knockout or collection at the auxiliary flare station. There are no devices for regulating stack temperatures.

The auxiliary station operates similarly as an unmanned station, although there is no electrical annunciation of station failure. Visual inspection is necessary to verify continuous flare operation.

1.1.1.3 Airdike System The Airdike System is located along the western and southwestern boundary of the site. The system is designed to inject air into the subsurface soil to form an air curtain in an attempt to prevent off-site subsurface migration of landfill gas. Operating Industries, Inc. installed this Airdike System rather than gas extraction wells in this area due to the potential for inundation of the wells of the south parcel. The airdike system consists of the compressor station, the wellfield, and the probes, as presented in Figure 1.1

Compressor Station. The compressor station (Figure 1.1) is located on a concrete pad in the southwest corner of the site, collocated with the auxiliary flare station.

Compressed air is supplied to airdike wells by two motor-driven identical positive displacement compressors, which operate in parallel. The system includes pulsation dampeners and a heat exchanger for cooling discharge air. Air flows from the cooler out to the well field through a 10" schedule 40 PVC line.

The main electrical panel is located next to the compressors. Compressor and cooler control panels are next to each unit.

The compressor station operates continuously as an unmanned facility. Station shutdown or malfunction is not annunciated. There is no automated recording of operating conditions.

Wellfield. The 34 airdike wells, approximately 100 feet apart on center, are constructed of 2 inch schedule 40 PVC pipe and are set into native soil. Wells range in depth from 15 to 158 feet and have perforated zones between 5 and 40 feet. The header lines, also constructed of PVC, are buried

from 2 to 10 feet below grade. The airdike header lines are not equipped with valves for flow adjustment or maintenance diagnostics. Well adjustments are made by throttling valves at each injection well head, or changing the size of the orifice plate used for flow measurement.

Airdike Probes Airdike probes are located approximately 50 feet from each well on center. Probes are of PVC construction and sample from depths of 3 and 20 feet. There are a total of 34 probes and 41 sampling depths.

1.2 Leachate Collection Systems Between 1980 and 1986, Operating Industries, Inc. installed portions of the leachate collection system on an as-needed basis as ordered by the South Coast Air Quality Management District (SCAQMD) to respond to leachate seeps. Prior to October 1984, collected leachate was mixed with incoming refuse and was redispersed as part of the ongoing landfill operations. After the Regional Water Quality Control Board (RWQCB) prohibited this redispersion of leachate, OII began hauling the leachate off-site for disposal or treatment. In 1984, EPA assumed responsibility for leachate trucking and treatment when OII stated it could no longer afford to continue off-site treatment. EPA currently trucks all hazardous liquids generated at OII to an off-site treatment facility as part of the site control and monitoring activities. Approximately 4000 gallons of leachate per day is currently collected from the existing leachate collection system. This system does not collect leachate which has percolated deeper into the landfill and which may be contaminating groundwater. Components of the system may need modifications to improve leachate collection efficiency.

The existing system consist of various combinations of shallow french drains, extraction wells, disposal borings, sumps, pumps, leachate lines, underground collection tanks, and above-ground storage tanks installed in five portions of the southern parcel of the OII landfill site. The existing collection system is divided into Areas I through V as illustrated in Figures 1.3 and 1.4.

1.2.1 Area I Collection Area I of the leachate collection system is located in the southeastern portion of the site. Although liquid waste disposal was not permitted in Area I, leachate seeps were reported here in 1981. The current collection system in this area of the landfill, which was installed in 1981, consists of shallow french drains and gravel trenches leading to thirteen 36-inch diameter disposal borings which are 70 to 100 feet deep and terminate in dry trash. Seven of the wells consist of gravel pack only with the remaining 6 cased with PVC pipe, although no in-place pumping mechanism currently exists for these wells. All disposal borings, except 2 of the PVC-cased wells, serve to collect leachate from a series of shallow (less than 5 feet deep) gravel trenches which are tied into the borings for redispersion into the landfill. No active pumping of leachate is currently conducted in Area I.

Site personnel suggest that the 2 unconnected wells were originally drilled as part of the gas extraction system, but were never connected to the system. No recent seeps in the southeastern portion of the OII site have been reported. One deep monitoring well, Well R, is also located in Area I.

Well R consists of a 6-inch casing extending from the top deck of the landfill, through the refuse fill, and into the native material below the fill. Well R was sounded on September 24, 1986, and showed 10 feet of liquids present in the bottom of the well. The well was originally constructed to monitor the water beneath the bottom of the fill.

A toe buttress was constructed by EPA as an emergency response action in early 1987 along the south/southeastern perimeter of the landfill in Area I to support the landfill slopes. As part of the buttress construction, a leachate collection system was installed consisting of collection pipes and three 1,000-gallon storage tanks designed to capture leachate migrating toward the site boundary. These storage tanks are not currently connected to the existing site leachate collection manifold. There has been no leachate detected in the tanks since their installation in February, 1987.

1.2.2 Area II Collection. Area II is located on the south/southeastern side of the landfill above the city of Montebello's Iguala park and consists of the eight 36-inch diameter wells at total depths of 70 to 80 feet, extending through approximately 10-15 feet of landfill refuse and into native earth material. The lower 60 feet of the wells consists of perforated PVC casing and gravel pack designed to directly intercept the leachate.

All of the wells are connected to the perimeter gas extraction system header line by a 1 1/2 inch PVC vapor collection line to extract gases from the well casing above the leachate.

Leachate from 5 of the 8 wells is pumped by electrically-powered impeller-type submersible pumps. The main switch-circuit breakers for these pumps are located at the irrigation control panel in the southwest corner of the site. One of the 8 wells is pumped by a manually-operated pneumatic air lift pump which is supplied by the air-cooled single stage Swan compressor located in the auxiliary flare station compound. This well was converted from a submersible pump to the pneumatic air lift pump due to frequent failures from oil, grease, and solids buildup.

The 2 newest wells are outfitted with automatic pneumatic ejector pumps which are supplied by the 2 positive-displacement reciprocating airdike compressors located in the auxiliary flare station compound. All eight wells are connected to a 4-inch collection manifold for discharge to the to the underground tanks in Area III described in Subparagraph 1.2.3 of this section.

Four disposal borings which exist in Area II are not connected to the manifold and underground tanks. In the past, these borings have been pumped by vacuum trucks, although no pumping records are available. Recent investigation has indicated that the casings in all 4 borings have sheared at depths ranging between 15 and 28 feet.

1.2.3 Area III Collection. The main leachate collection system in Area III, the south/southwestern corner of the site, consists of a series of shallow (less than 5 feet deep) buried perforated pipes and trenches which discharge by

gravity into 3 buried steel tanks. The 3 tanks rest in a gravel bed at a crown depth of approximately 6 feet. The gravel bed is underlain by landfill refuse. Local leachate which collects in the gravel bed can flow into the tanks via a 4-inch local collection line, or into a horizontal 8-inch PVC pipe which is perforated through the depth of the gravel bed. The existing storage tanks are from old vacuum trucks and are suspected to be leaking.

Leachate collected in the buried tanks and gravel bed in Area III is pumped by a pneumatically operated diaphragm pump. Compressed air to operate the pump is supplied by the Swan compressor, described in Subparagraph 1.2.2 located at the auxiliary flare station. Pumping is manually controlled utilizing a system of gate valves and is currently performed once per day. Leachate is pumped from the buried tanks and gravel bed through a 2 1/2-inch PVC line to the above-ground, on-site storage currently located west of Area IV.

Ongoing improvements to Area III include the installation of a new concrete sump with an automatic pumping system to replace the underground storage of leachate, replumbing leachate collection lines from the underground tanks to the sump, sandfilling and abandoning the underground tanks, and constructing french drains around the existing gravel bed. The existing pneumatic diaphragm pump, which is in poor condition, is currently being replaced with a flop-valve double diaphragm pump. The existing Swan compressor is currently being replaced with a 15 hp compressor to supply the increased air demands. It is expected that these improvements will be completed by the fall of 1988.

Also present in Area III, southwest and down-slope of the buried tanks along the boundary of the OII site, is a shallow french drain system which leads to a 36-inch diameter unlined gravel sump approximately 20 feet deep. Leachate which collects in this sump is pumped to one of the buried steel tanks by 2 air lift pumps set at 15 and 20 foot depths. Compressed air for the pumps is supplied by the airdike positive displacement reciprocating compressors.

1.2.4 Area IV Collection. The main leachate collection system in Area IV is located on the western boundary of the site, consists of shallow gravel trenches leading to a main trench which feeds a gravel-filled, unlined, 36-inch diameter sump approximately 60 feet deep. Two long shallow trenches, one which runs along the western side of the site and the other which runs along the northwest, drain to the main gravel trench.

The sump contains 3 vertical 6-inch perforated PVC casings. Two of the casings contain air lift pumps at 10 feet and 35 feet below grade. The third casing does not contain a pump. Operating air for the airlift pumps is currently supplied by the airdike positive displacement reciprocating compressors. Collected leachate is pumped directly to the above-ground leachate storage tanks also located in Area IV.

Design plans and specifications are currently being developed for a 40-foot deep concrete wet well and pneumatic ejector pump to replace the existing sump. Air to operate the pump will be supplied by a new compressor which will be dedicated to future pumping needs of Area IV and V. It is expected that these improvements will be completed by the fall of 1988.

Four inactive extraction wells also exist in Area IV. Details of the wells and their conditions are not available, although their casing sizes are 10", 10", 10", and 8". Preliminary investigation has indicated the presence of an unconnected air lift pump in one well although the depth and condition of the pump are unknown. All 4 wells reportedly contained an oily liquid.

1.2.5 Area V Collection. The leachate collection system in Area V, located in the northwestern portion of the southern parcel of the landfill, is similar to the system in Area I. It consists of shallow gravel trenches containing perforated 4-inch PVC collection pipes leading to 2 cased (10-inch casing) leachate disposal borings drilled into refuse at depths of nearly 100 feet. No active pumping of leachate is currently conducted in Area V. It is believed that leachate seeps reported in this area in the past occurred due to the stockpiling of dirt, which caused compression of landfill material up-slope of seep areas and subsequent reduction of liquid holding capacity. When the burden material was removed, the leachate seeps disappeared. Recent investigations indicate the presence of an air lift pump in one well. This air lift pump is not currently operating and the condition of this pump and depth in the well are not known at this time. One well was reported to contain 75 feet of oily liquid. There have been no recent seeps reported in Area V.

1.2.6 On-site Storage. The above-ground leachate storage tanks are located in Area IV west of the access road. Total above-ground storage currently consists of 5 rented 20,000 gallon tanks. The tanks are surrounded by an earthen berm and underlain by a buried membrane liner. Leachate, condensate from the perimeter flare station, and other liquids from the remedial investigation activities are stored here until removal for off-site treatment/disposal.

1.3 Landscaping/Irrigation. There are currently 3 irrigation systems on-site. No irrigation lines exist on the north parcel or on the top deck of the landfill. Water to all systems is fed from an electrically driven supply pump located in a compound just east of the compressor station/auxiliary flare station. The general location of these systems is indicated on Figure L5

1.3.1 Oil System. OIL installed a manually-operated irrigation system on the south, east, and north sides of the landfill. Few details are available on the system or current operation.

Operation of this system is currently the responsibility of OIL. Coordination is required between the SCM contractor and OIL personnel to ensure that the manually operated supply pump is active during the time that the automatic systems will be operating.

1.3.2 Toe Buttress System and Northwest Slope System. The SCM contractor currently operates only the toe buttress and northwest slopes systems installed by EPA. These are both automatically operated by locally mounted control boxes, at which watering start and stop times can be adjusted.

1.4 PASSIVE CONTROL SYSTEMS.

1.4.1 Stormwater/Erosion Control. Stormwater runoff is routed via a network of V-ditches or down drains. There are 4 down drains which convey surface water from the landfill top deck and benches to existing storm sewer channels and natural channels off-site. The down drains consist of corrugated pipe placed at a slope to allow natural flow by gravity. The locations of these down drains are indicated in Figure 16.

Approximately 16,500 linear feet of concrete drainage swale or V-ditch drains 3 of the terrace roadways (or benches). The ditches have experienced significant subsidence in some areas and require frequent maintenance to achieve adequate drainage control.

Interim drainage improvements to the top deck of the landfill include placement of additional fill to maintain critical flowlines, repair of inlet structure to Line A, replacement of Line A, and construction of clay V-ditches. It is expected that these improvements will be completed by the fall of 1988.

1.4.2 Site Access and Security. The following support facilities and equipment serve a security function at the OII site:

1.4.2.1 Access Roads. The site roadway system connects all portions of the site to a single north parcel entrance as indicated in Figure 17. Bench roads, on the slopes of the fill, remain from the various lifts that were constructed during the landfilling operation and are often referenced by their original MSL elevation. The Greenwood and Westmoreland extensions derive their name from a proposed plan of the City of Monterey Park to extend the existing avenues along these routes.

All road surfaces are dirt except for short paved sections of the flare stations access road and a portion of Westmoreland extension on the grade up to the top deck.

Bench roadways are narrow and require care when driving especially under wet conditions. Many roadways may become impassable, even to four-wheel drive vehicles, during the rainy season. Access to the main perimeter and interior flare stations and trailer compounds however, is fairly good under these conditions, even to passenger vehicles. Bench roads are often too narrow to allow safe turnarounds, and passing may be difficult in places.

1.4.2.2 Perimeter Fencing. Fencing of varying height (approximately 6 to 8 feet) and construction encircles the perimeter of the site. Fencing is sufficient to preclude vehicle access and most foot traffic; however, it is mainly of untopped chain link and therefore can be climbed relatively easily. Permanently locked gates exist in several places along the perimeter fence line and can be

1.5.3 Water Meter Boxes. Also in the neighborhoods to the south of the South Parcel are a number of water meter boxes that are regularly monitored. As the name implies, these are vaults, mainly in the sidewalks, that contain residential water meters. Migrating landfill gases rise through the soil floor of the vaults and are held in the box by the hinged metal cover. The atmosphere of the boxes is monitored as an indication of landfill gas migration level and extent. Due to continually elevated gas levels in certain boxes, a number of the steel lids were replaced by EPA. The new perforated lids may let the gases escape and prevent exposure to water company personnel.

1.5.4 Meteorological Station. The meteorological station is located on the top deck of the southwest corner of the site. The following items are measured: rainfall level, solar radiation, wind velocity and direction, barometric pressure and humidity.

1.5.5 Geotechnical Instrumentation. There are 36 surface monuments mainly concentrated on steep slopes (North Slope and toe buttress). The observation are conducted by both ground and aerial surveillance on a monthly basis. There are 11 inclinometers; two sets are deployed on the North Slope and the rest around the toe buttress. Observations are done on a monthly basis. There are 8 piezometers for liquid level monitoring. The locations are similar to those of the inclinometers.

utilized if necessary to provide access the site for foot traffic or heavy equipment. These gateways are not suitable for passenger cars. Inside the perimeter fence, fencing topped with barbed wire and/or razor ribbon surrounds the three flare stations, the trailer compound, and the meteorological station.

1.4.2.3 Gate Security Office. An EPA-owned 6'x8' office trailer is presently located at the Greenwood Avenue access gate. The trailer has electrical service, but no water, sewer, or telephone service. The trailer is equipped with an air conditioner.

1.4.2.4 Security Lighting. Security floodlights exist in the trailer compound, at the interior and the main perimeter flare stations, and at the decontamination pad.

1.4.2.5 Utilities and Support Facilities. Power, water, phone, and sewer connections currently exist on the south parcel. Additional information on these services, and other site support facilities are presented in Section: Utilities and On-Site Facilities.

1.4.2.6 Entrance Gate. Access to the south parcel of the landfill is through the main Greenwood Avenue gate located on the north parcel.

1.5 MONITORING.

The general location of monitoring points is identified on Figure L8

1.5.1 Probes.

Perimeter Probes. Probes were installed by OII around the perimeter of the south parcel. These probes were intended to monitor landfill gas migration across the site boundary and were therefore placed primarily in native soil outside the refuse fill area. Probes are constructed of PVC pipe and polyethylene tubing, and are numbered 1A through 32 for a total of 55 probe locations. Many probes are screened at multiple depths, generally 5, 15, 25, 35, and 45 feet, but some have less than 5 screened depths and 17 have only a single depth.

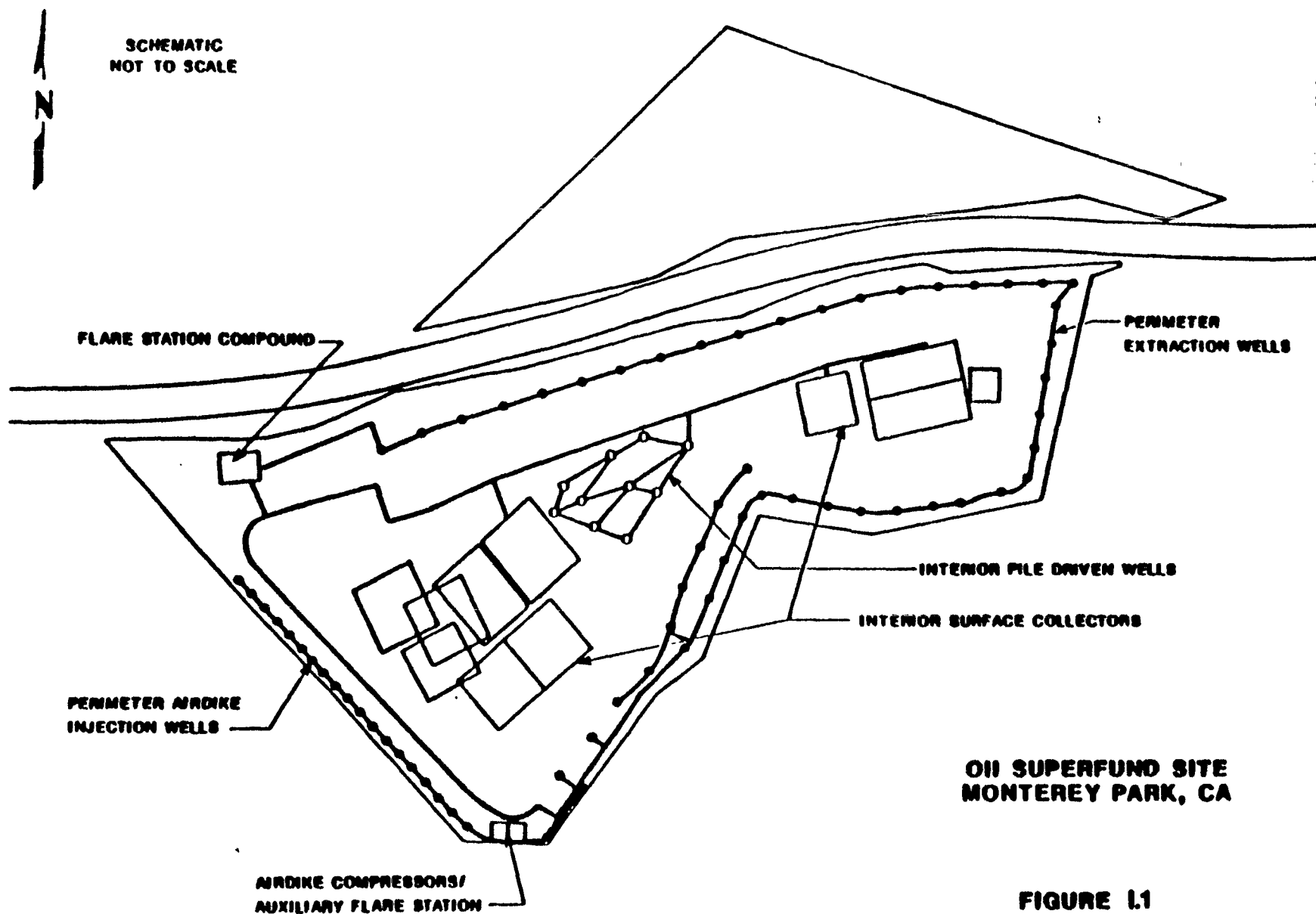
Off-site Probes. Twenty-seven multiple-depth probes were installed by the California Waste Management Board (CMWB) in the residential areas south of the south parcel. The probes are similar to the perimeter probes, have multiple depths between 5.5 and 49 feet, and are numbered 1 through 11A. These probes are used to monitor the migration of landfill gas into the residential neighborhoods.

North Parcel probes. Fifteen probes were installed at a single shallow depth on the north parcel by OII. These probes were meant to indicate the presence of landfill gas in the filled area of the north parcel, which has no gas control systems. Probes are number N-1 through N-15; probes 3, 4, 12, 13, and 15 have been destroyed or lost and are no longer monitored.

1.5.2 Wells.

Landfill Gas Monitoring Wells. Two sets of landfill gas monitoring probe systems, known as Gas Monitoring Wells (GMW), have been installed by EPA on the north and south parcels. Each well contains from 2 to 6 probes at different depths. The north parcel contains 13 of these wells with probe depths ranging from 20 to 120 feet. There are 15 south parcel wells designated with probe depths ranging from 20 to 340 feet.

SCHEMATIC
NOT TO SCALE



OIL SUPERFUND SITE
MONTEREY PARK, CA

FIGURE I.1
GAS MANAGEMENT SYSTEM

EXISTING OIL GAS MANAGEMENT SYSTEM

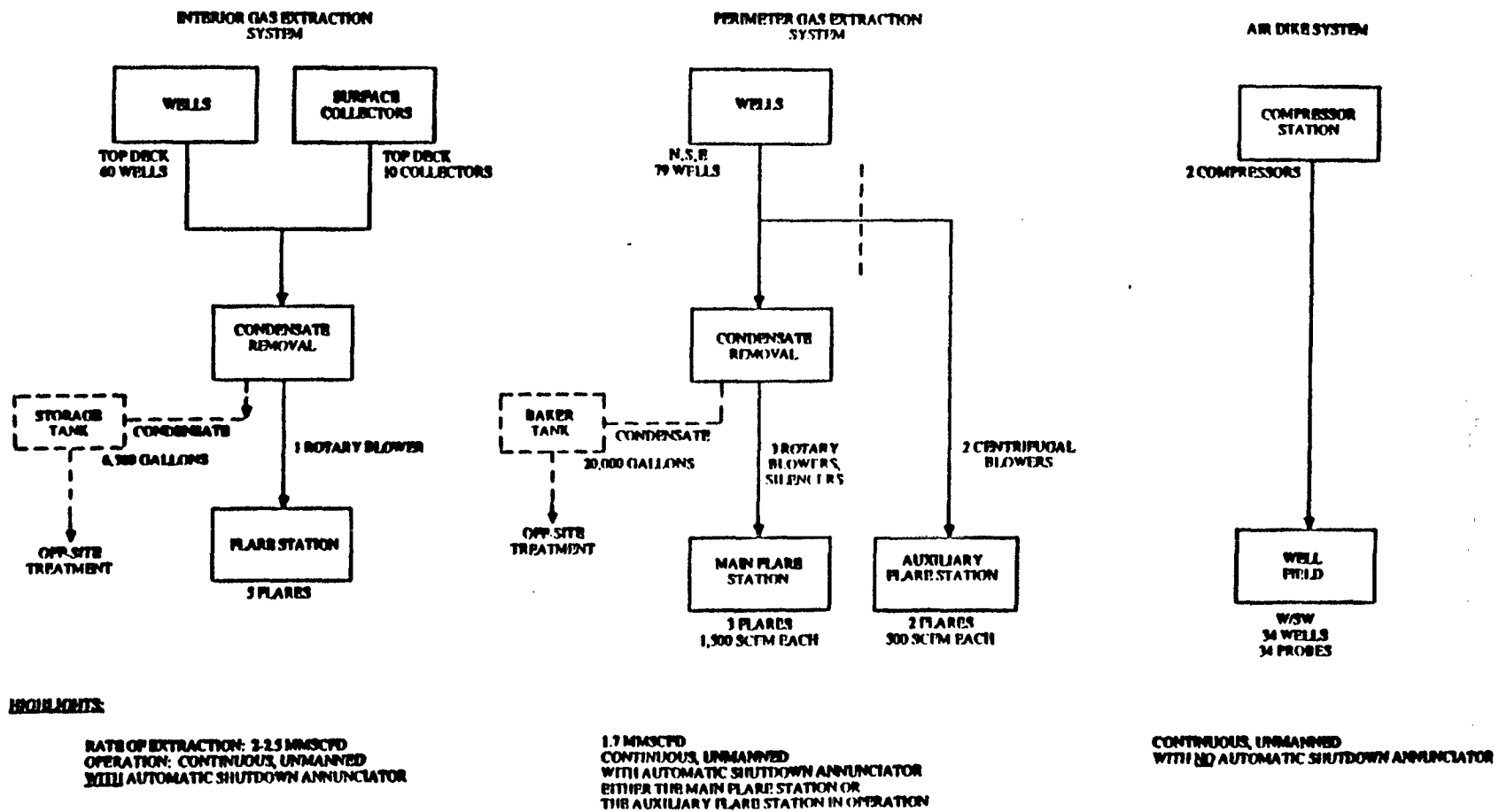
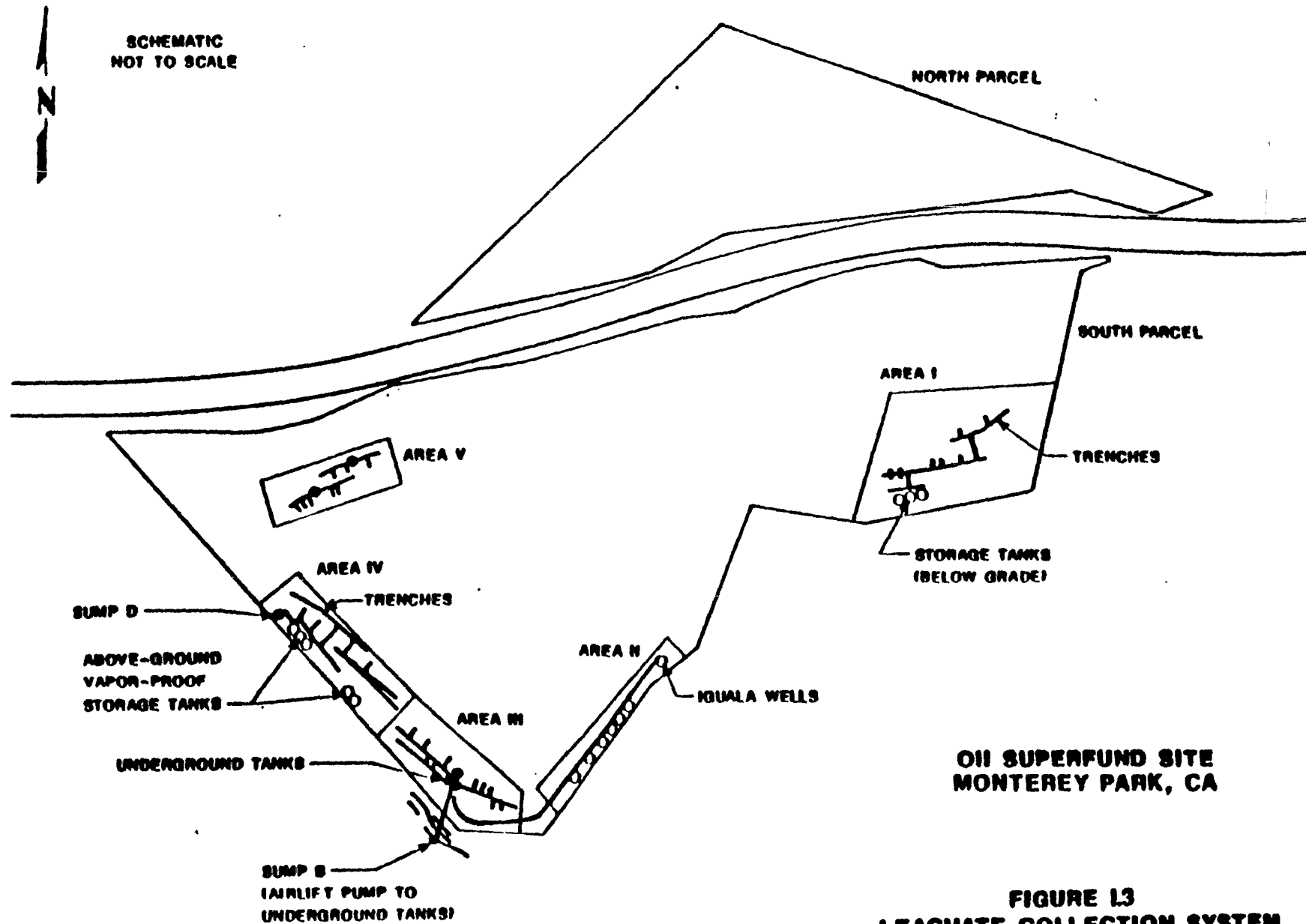
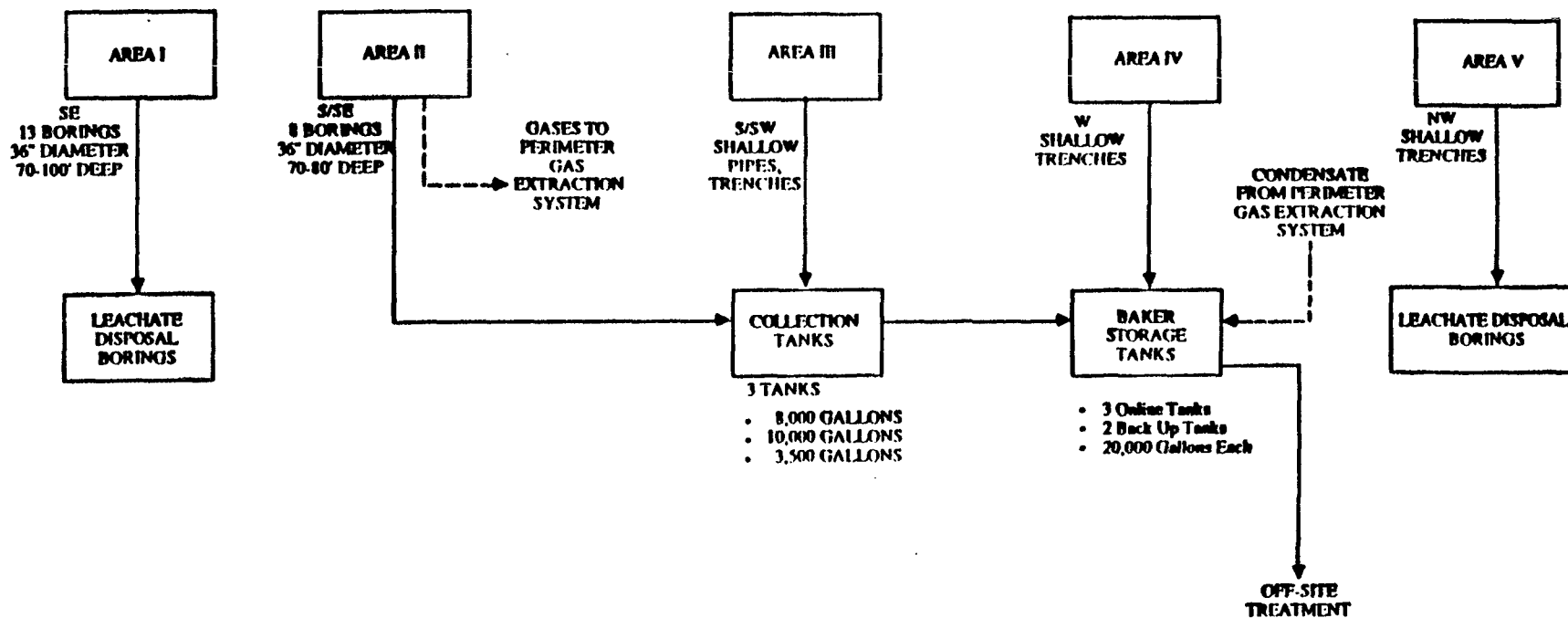


FIGURE 1.2



EXISTING OIL LEACHATE MANAGEMENT SYSTEM



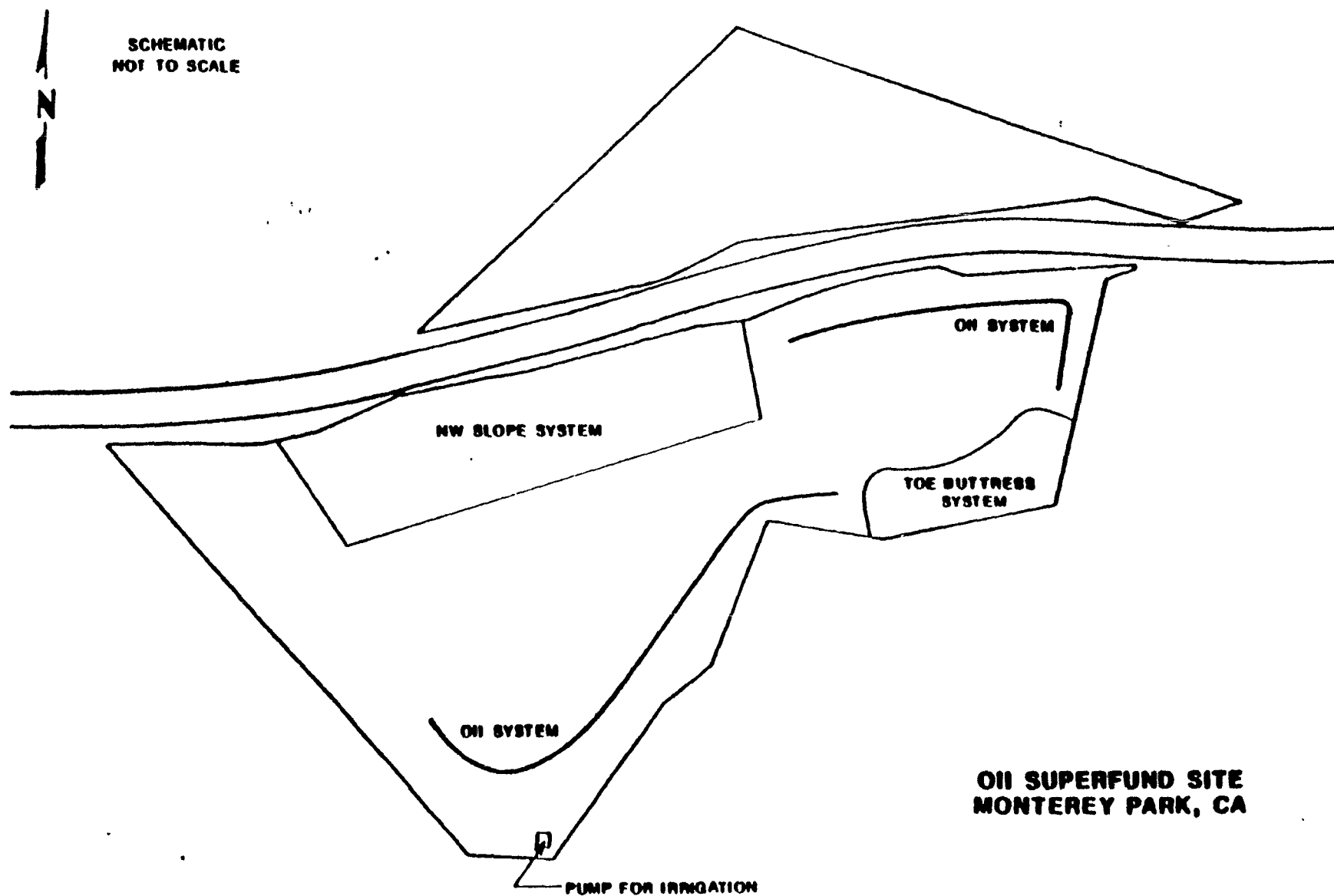
345

HIGHLIGHTS:

Not Connected to the Rest of the System.
No Active Leachate Pumping.

Similar to Area I.
No Active Leachate Pumping.

FIGURE I.4



OII SUPERFUND SITE
MONTEREY PARK, CA

FIGURE I.5
LANDSCAPING/IRRIGATION SYSTEM

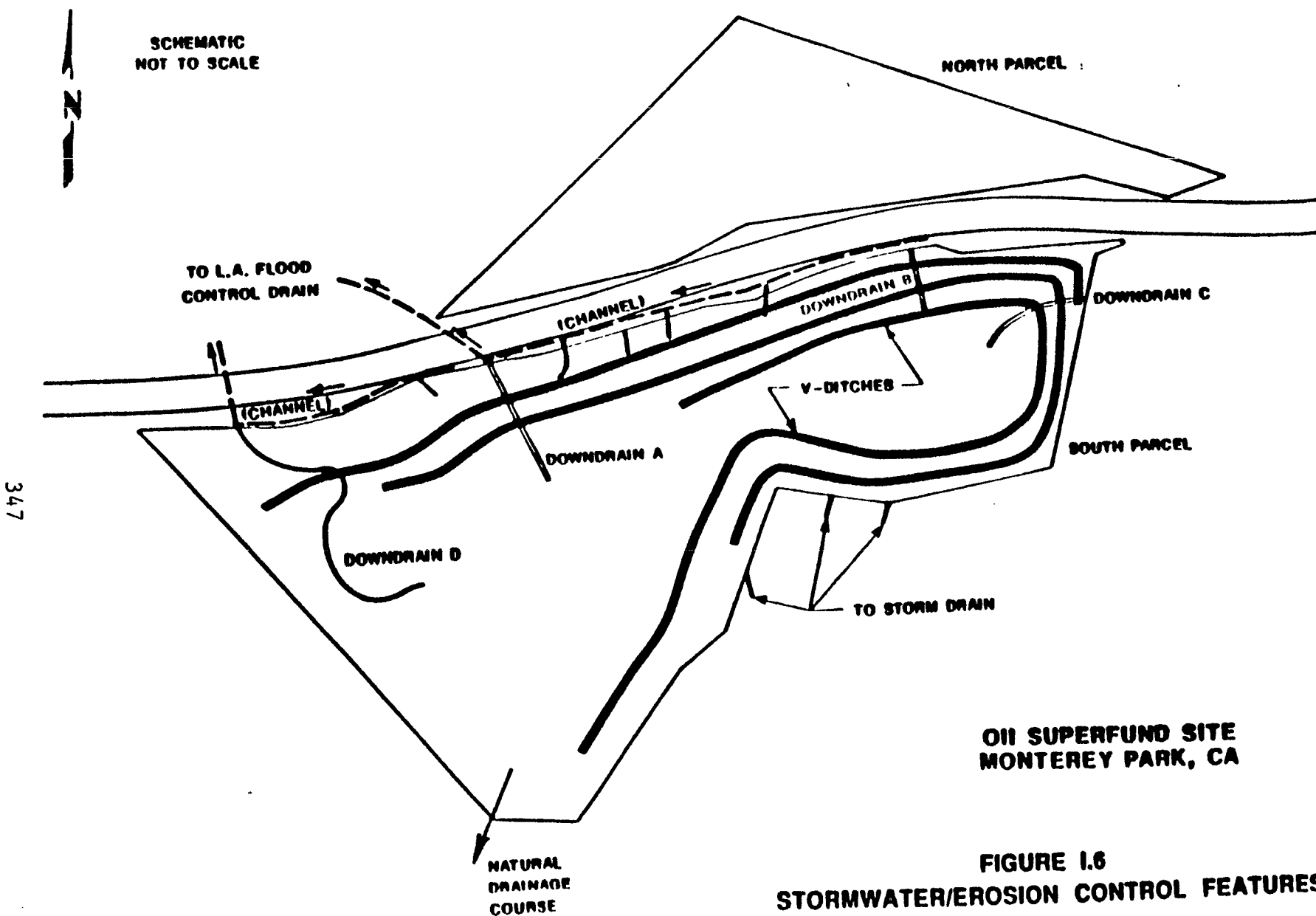
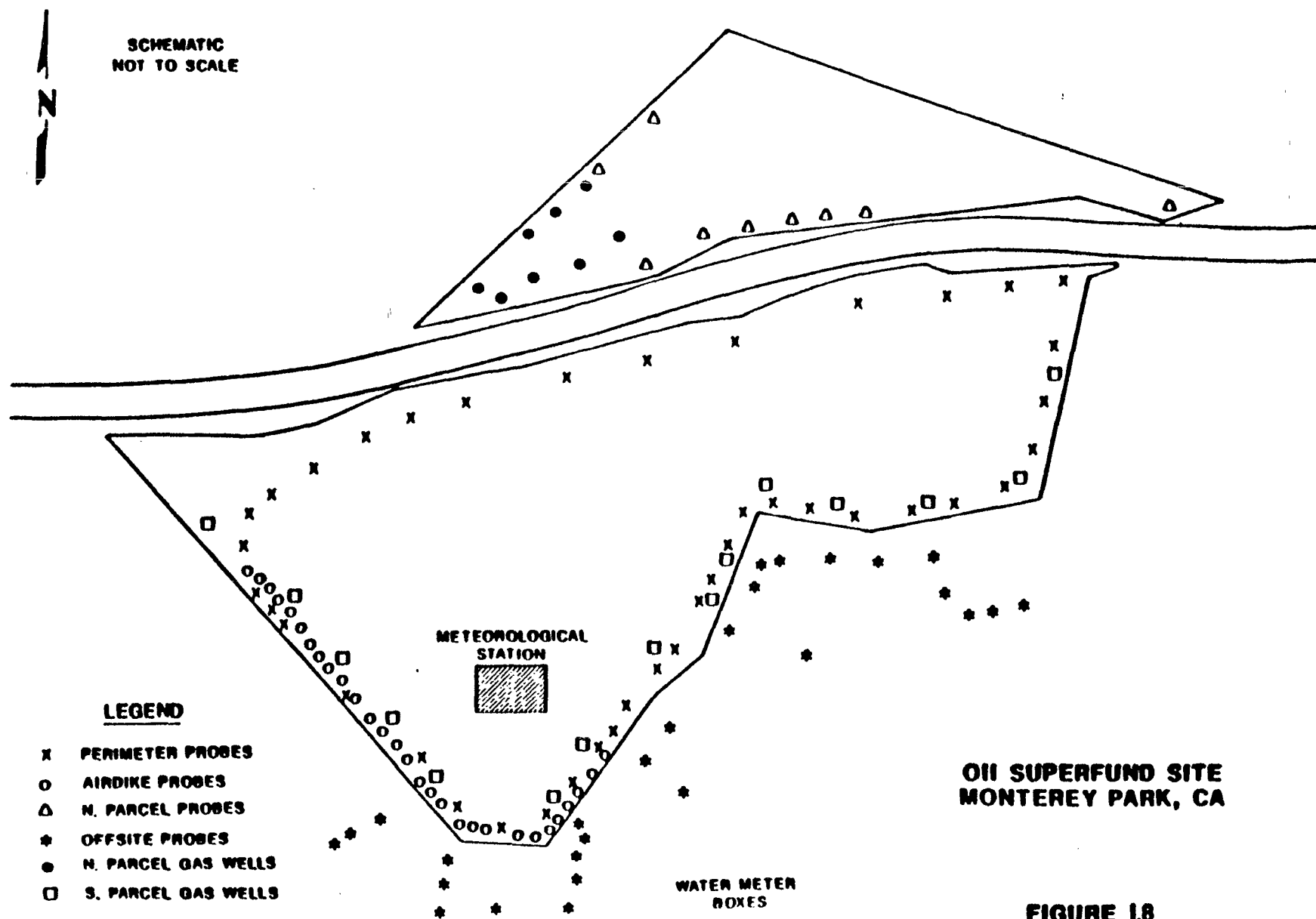


FIGURE I.6
STORMWATER/EROSION CONTROL FEATURES

348



**FIGURE 1.8
PROBES AND MONITORING POINTS**